III. Transportation Conditions

Existing Transportation Conditions

Existing Roadway Conditions

EXISTING ROADWAY FACILITIES

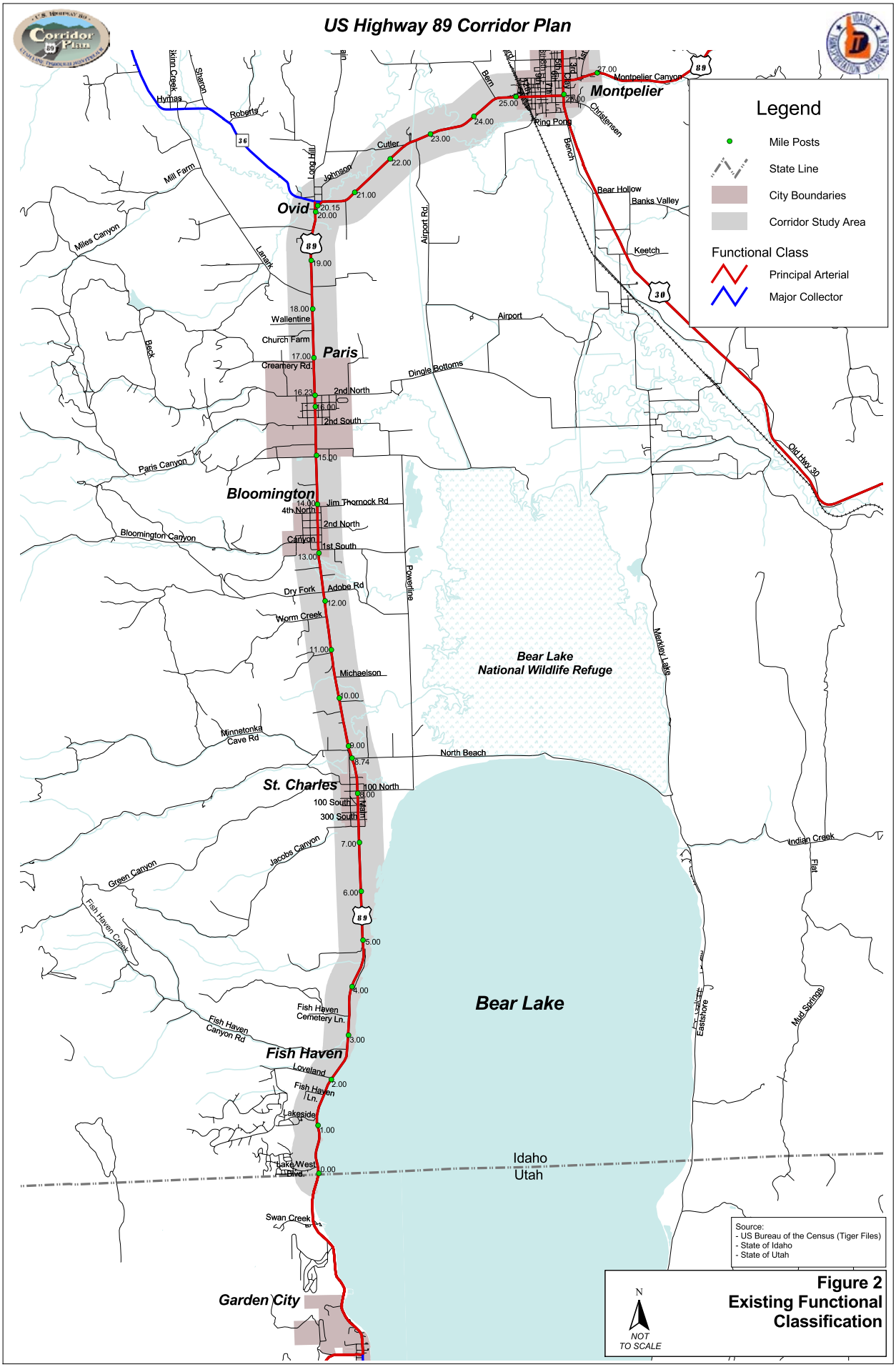
US Highway 89 is classified as a rural principal arterial within the Idaho State Highway Plan[3] (see Figure 2). Rural principal arterials are defined as having the following general characteristics:[4]

- Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel.
- Serve all, or virtually all, urban areas of 50,000 and over population and a large majority of those with population of 25,000 and over.
- Provide an integrated network without stub connections except where unusual geographic or traffic flow conditions dictate otherwise.

With regard to this functional classification, US 89 serves three types of traffic within the corridor study area:

- Internal-internal traffic, which are trips having both ends in the study area. An example of this would be a trip from Paris to Montpelier.
- Internal-external and external-internal traffic, which are trips with one end outside of the study area and the other end inside. An example of this would be the large percentage of trips carried on US 89 from Salt Lake City to the Bear Lake area.
- External-external traffic, which are trips with both ends outside of the study area, but pass through the study area. As a major multi-state recreational route connecting five national parks (Zion and Bryce Canyon Parks in Utah, Yellowstone and Teton Parks in Wyoming, and Glacier Park in Montana), US 89 carries a significant proportion of these trips.

[3] Idaho Transportation Department, Idaho State Highway Plan, (1998).
[4] Idaho Transportation Department, Transportation in Your Local Comprehensive Plan, (1998).


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
Functional Class
Principal Arterial
Major Collector
Montpelier
Montpelier Canyon
Ovid
Paris
Wallentine
Bloomington
Bloomington Canyon
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Hymas
Roberts
Cutler
Johnson
Mill Farm
Miles Canyon
Lanark
Back
Church Farm
Creamery Rd.
Dingle Bottoms
2nd North
2nd South
Paris Canyon
Jim Thornock Rd
4th North
2nd North
Canyon
1st South
Dry Fork
Adobe Rd
Worm Creek
Powerline
Michaelson
Minnetonka Cave Rd
North Beach
100 North
100 South
300 South
Main
Jacobs Canyon
Green Canyon
Fish Haven Creek
Fish Haven Cemetery Ln.
Fish Haven Canyon Rd
Loveland
Fish Haven Ln.
Lakeside
Lake West Blvd.
Swan Creek
Ring Pond
Christensen
Bench
Bear Hollow
Banks Valley
Keetch
Airport
Airport Rd.
Old Hwy 30
Markley Lake
Indian Creek
Flat
Mud Springs
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 2
Existing Functional Classification

Along most of the corridor, these traffic volumes are accommodated by two through travel lanes. The only exceptions to this are in Paris and Montpelier, where US 89 widens to four lanes over short sections of the highway (see Figure 3). There are no passing lanes within the two-lane sections. Median turn lanes are provided in Montpelier between Washington St. and Clay St. and for a short distance to the east of 4th St. The only intersections with turn lanes are in Montpelier at Washington St./4th St. and 4th St./Clay St. The shoulders along US 89 are either asphalt or a combination of asphalt and earth and range from 3 to 11 feet in width.

US 89 is located on a generally straight and level alignment within the study area, with a few large curves in the Fish Haven and Ovid areas. Structures are located at South St. Charles Creek, North St. Charles Creek, Bloomington Creek, Ovid Creek (south), Ovid Creek (east), Bear River Canal, Bear River, and 12th St. railroad overpass in Montpelier.

Operationally, the speed limits along US 89 range from 25 mph for segments in Paris and Montpelier to 65 mph in the undeveloped and less developed areas outside of Fish Haven, St. Charles, Bloomington, Paris, and Montpelier. No-passing zones are generally infrequent, with an average of about 15% along the two-lane sections. Intersection traffic control is provided by stop signs on all minor road approaches to US 89, with the exception of Washington St./8th St. in Montpelier, where there is a traffic signal.

All county roads intersecting with US 89 are two-lane facilities. State Highway 36, which intersects US 89 at Ovid corner, is a two-lane major collector. US Highway 30, which forms a portion of US 89 between Washington St. and Clay St. in Montpelier, is a four-lane principal arterial.

EXISTING TRAFFIC VOLUMES

As shown in Figure 4, existing annual average daily traffic (AADT) volumes are relatively low throughout the corridor, ranging from roughly 1,000 to 8,500 vehicles per day (vpd). AADT is defined as the annual total two-way traffic volume along a particular segment, divided by the number of days in the year. The AADT data was obtained from ITD's Graphic Roadway Application for Information Location (GRAIL) database. The highest volumes of 6,000 to 8,500 vpd occur within Montpelier. Volumes generally range from 2,000 to 3,000 vpd between the Idaho-Utah state line and St. Charles, reflecting the recreational traffic within the Bear Lake area, and between Lanark Rd. and Montpelier. The lowest volumes of 1,000 to 2,000 vpd occur between St. Charles and Lanark Rd., with the exception of a short segment within Paris.

Because of the large component of recreational traffic carried on US 89 during the summer months, there is substantial seasonal variation in average daily traffic volumes.

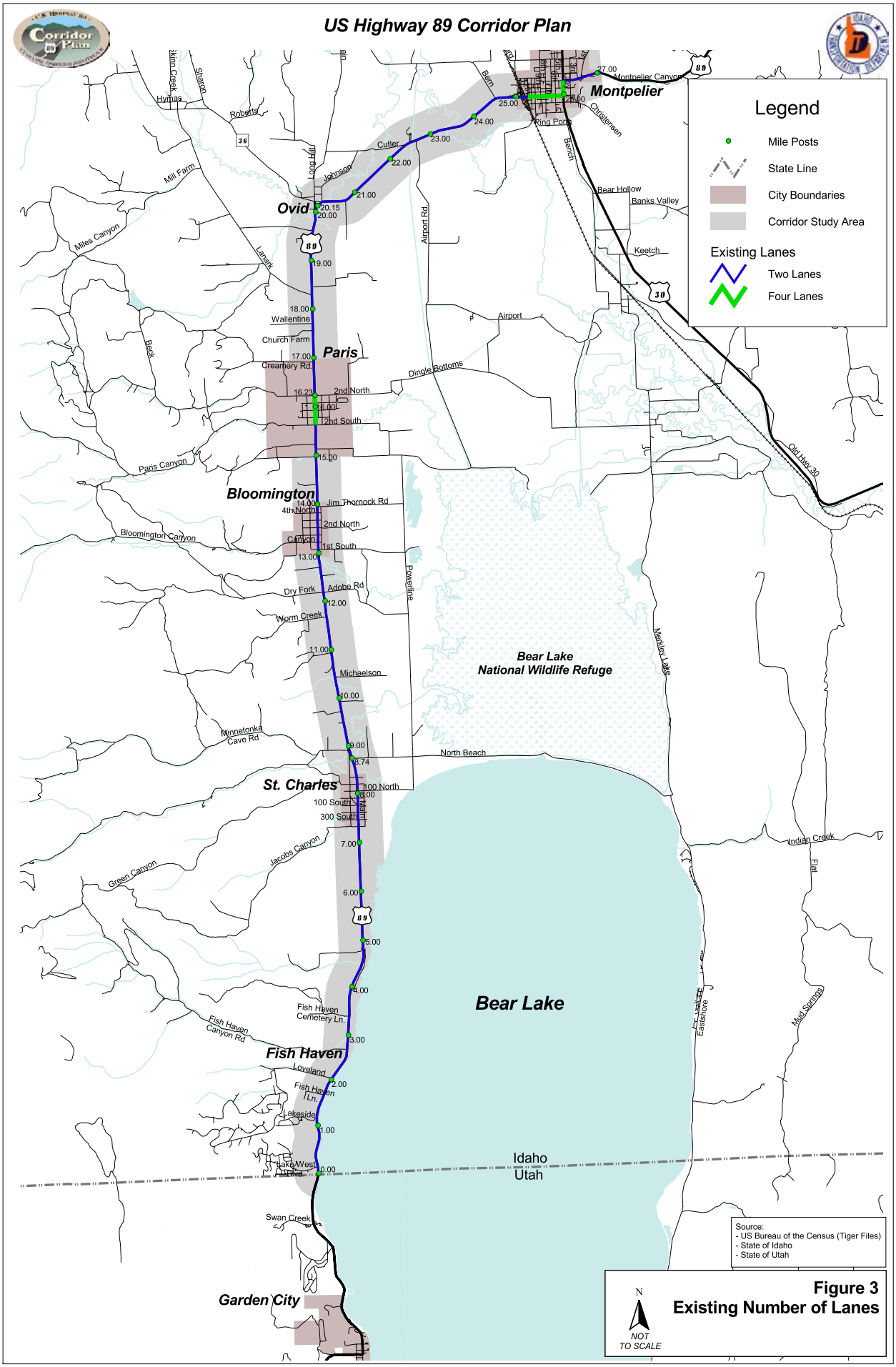


Figure 3
Existing Number of Lanes

US Highway 89 Corridor Plan

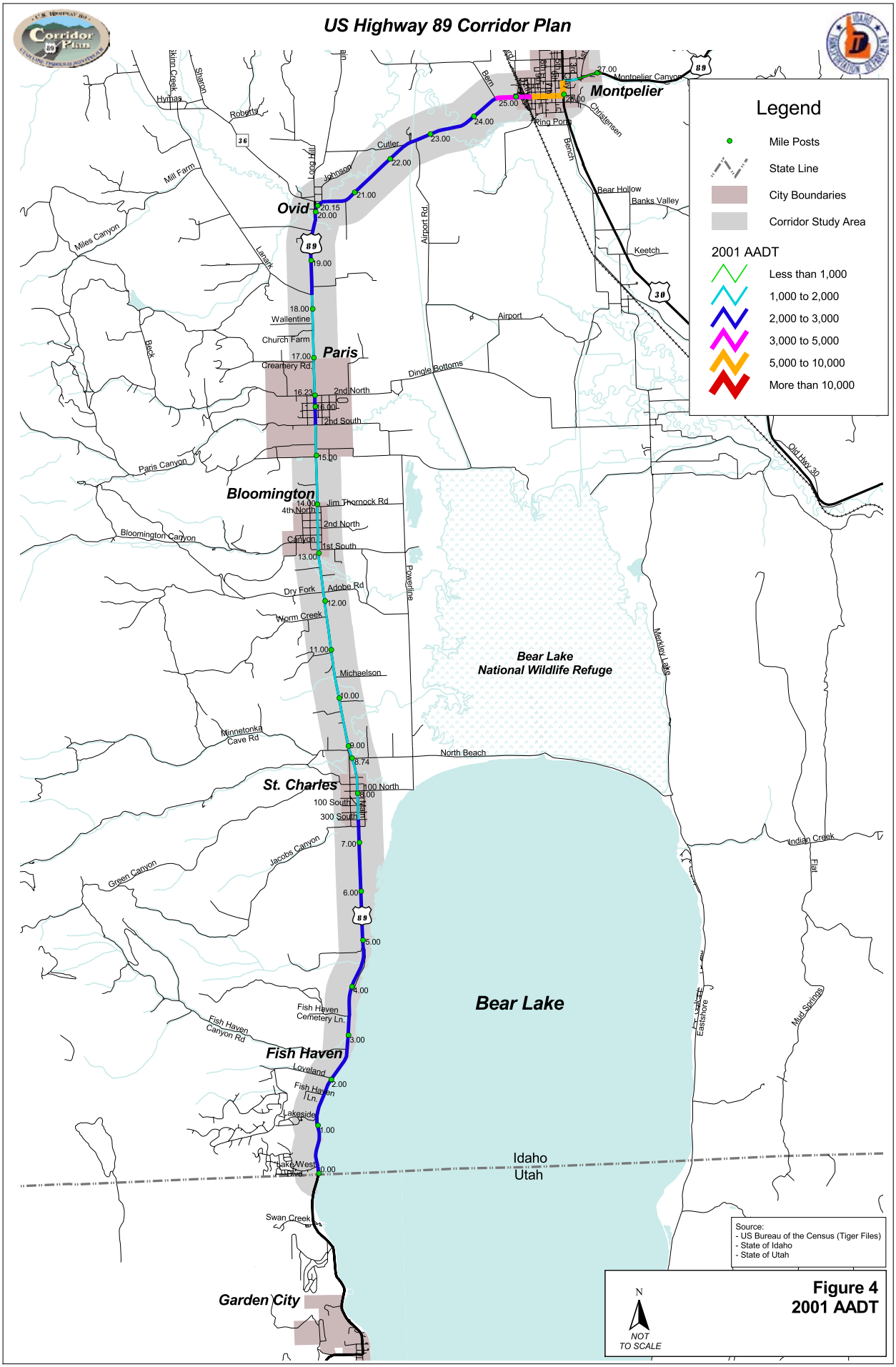
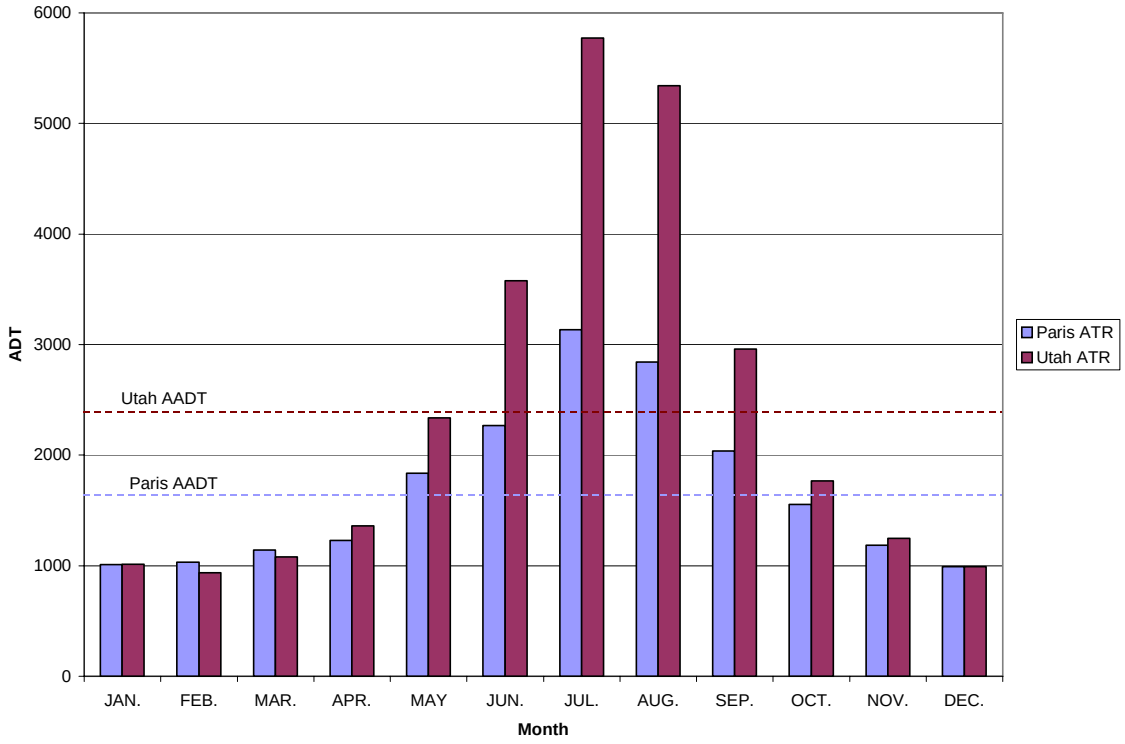


Figure 4
2001 AADT

This can be seen from the monthly ADT volumes shown in Figure 5.

Figure 5
US 89 Monthly Traffic Variation

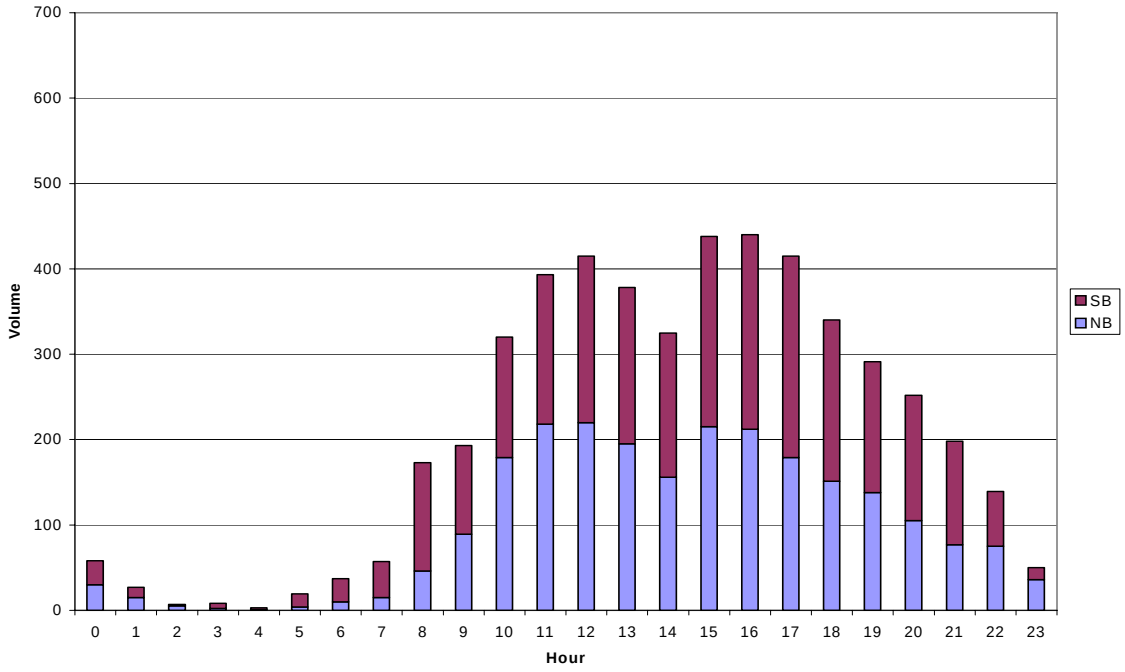


The ADT data was obtained from two automatic traffic recorders, one between Bloomington and Paris and the other at the south end of the corridor between Garden City, Utah and the Idaho-Utah state line. At the Bloomington-Paris location, the ADT of roughly 3,000 vpd for the peak month of July is over three times higher than the ADT of 1,000 vpd for the winter months of December through February. This relationship is even more pronounced at the Utah location, where the July ADT of nearly 6,000 vpd is six times higher than the 1,000 vpd for the winter months.

Variation in traffic volumes by hour of the day is shown Figure 6 for three locations along the corridor. The volume data was obtained from 24-hour traffic counts performed on Saturday, July 27th, 2002 during one of the highest-volume periods of the year. At the first location between Lakeside Dr. and Fish Haven Lane in the Fish Haven area, volumes increase steadily until 11:00 a.m. and remain at peak levels until 6:00 p.m. This probably reflects the continuous level of recreational activity that occurs in the Bear Lake area in the summer during this period of the day. Between Bloomington and Paris, the diurnal distribution of traffic is centered around an afternoon peak occurring between 2:00 p.m.

Figure 6
US 89 Hourly Traffic Variation

M.P. 1.5 – Lakeside Dr. – Fish Haven Ln.



M.P. 14.6 – Bloomington - Paris

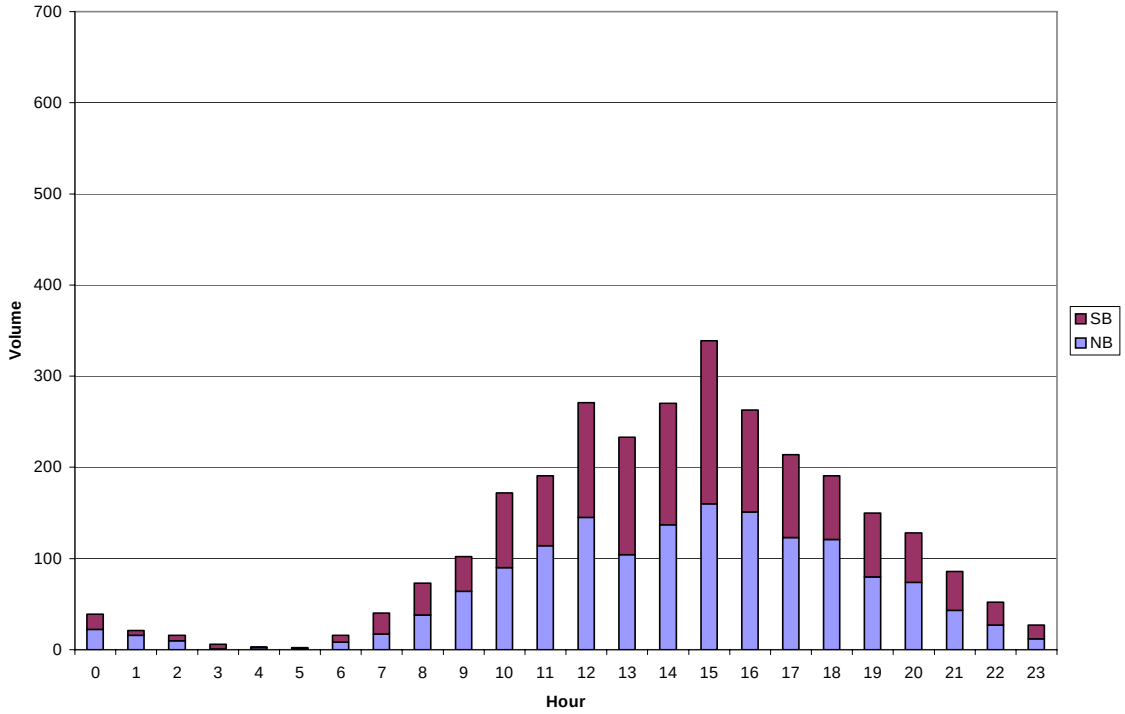
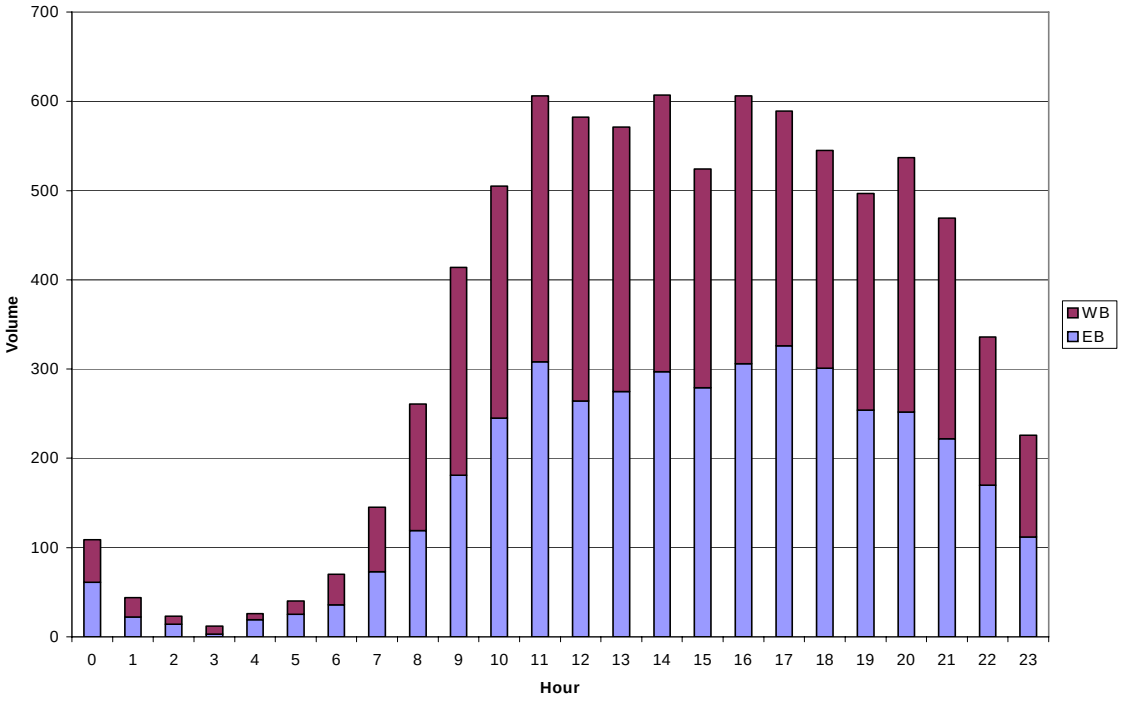


Figure 6 (cont.)
US 89 Hourly Traffic Variation

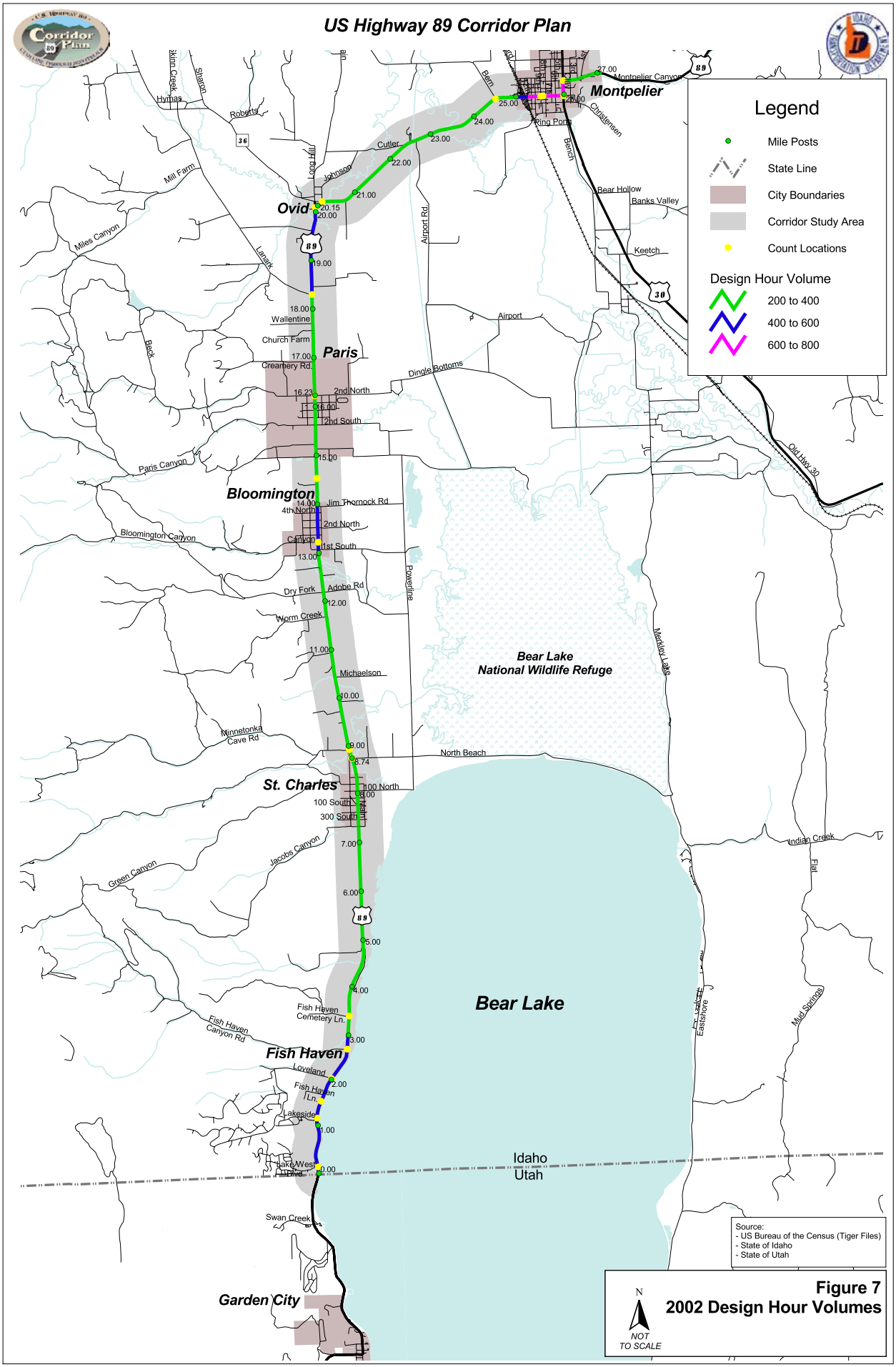
M.P. 25.6 – Montpelier



and 3:00 p.m. At the third location in Montpelier along Washington St. between 7th St. and 8th St., the traffic pattern is similar to that in the Fish Haven area, with volumes increasing steadily until 10:00 a.m., then remaining at peak levels until 8:00 p.m.

Design hour volumes (DHVs) are shown in Figure 7. These volumes correspond to the time period for which existing and future deficiencies were analyzed. For the corridor study area, it was decided that the 30th highest hour would be the most appropriate design hour. Thus, the DHVs shown represent the 30th highest hourly volumes of all hourly volumes during the year. The decision to use 30th highest hour volumes rather than average weekday peak hour volumes was based on the strong seasonal traffic peaking characteristics described above. Use of these volumes allows peak period traffic demands and facility needs to be accurately represented, thus avoiding the underestimation of these demands and needs that would occur with the use of average weekday peak hour volumes.

Within the study area, the 30th highest hour along US 89 occurs in late July. This was determined through the examination of historical traffic count data from the two automatic traffic recorders described previously. Based on this information,


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
Count Locations
Design Hour Volume
200 to 400
400 to 600
600 to 800
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 7
2002 Design Hour Volumes

one-hour traffic counts were performed during the afternoons of Saturday, July 20th and Saturday, July 27, 2002 at the locations shown in Figure 7.

COMMITTED AND PLANNED ROADWAY IMPROVEMENTS

There are no committed or planned improvements for US 89 or any of the county roads within the study area.

EXISTING ROADWAY NEEDS

Existing needs in the areas of capacity and level of service (LOS), traffic operations, safety, and geometrics were identified through two approaches. With the first approach, existing roadway conditions within each area were measured using the transportation inventory data and compared to ITD standards. Where the standards were not met, deficiencies were identified. The second source of information on existing deficiencies was from stakeholders, agency staff, and the public. This information was obtained through a series of stakeholder interviews, an ITD Management Team meeting, a joint Technical Advisory Committee and Task Force meeting, and a public open house. It is described within the "Reported Deficiencies" sections below as well as Table A-1 in Appendix A.

Existing Capacity and Level of Service

Existing capacity and LOS deficiencies were identified by comparing LOS estimates for all road segments and higher-volume intersections along US 89 to LOS standards for the study area. The basic level of service standard for rural principal arterials is LOS "B", as defined in ITD's *Highway Design Manual*.[5] In conjunction with ITD District 5 staff, this standard was modified to be consistent with existing and anticipated future levels of development adjacent to specific segments of US 89. The modified LOS standards are shown in Table 1 below.

Table 1
US 89 Level of Service Standards

Segment		LOS Standard
From	**To**	
Idaho-Utah state line	E. 2nd North St. (Paris)	C
E. 2nd North St. (Paris)	12th St. overpass (Montpelier)	B
12th St. overpass (Montpelier)	Montpelier e. city limit	C

[5] Idaho Transportation Department, Highway Design Manual, (2002).

Existing LOS on Roadway Segments

Segment LOS estimates were developed using the 2002 DHV counts described earlier. The segments and associated LOS estimation methodologies that were used were defined primarily by changes in the level of development adjacent to the highway. For two-lane segments in rural undeveloped areas, such as between Fish Haven and St. Charles, the LOS analysis was performed according to the methodology outlined in the *2000 Highway Capacity Manual (HCM2000)*[6] for two-lane rural highways. With this methodology, the criteria for determining level of service are average travel speed and percent time-spent-following. These criteria reflect drivers' expectations in undeveloped areas to travel at reasonable speeds and have the ability to maneuver around slower-moving vehicles traveling at less than the desired speed.

Within the rural developed areas of Fish Haven, St. Charles, Bloomington, and Paris, a second methodology developed by the Florida Department of Transportation (FDOT) was used. This methodology, called HIGHPLAN, uses the *HCM2000* analysis technique for rural two-lane highways, but implements LOS thresholds based on percent of free flow speed. It is based on the belief that the most relevant service measure for motorists on two-lane highways in developed areas is to maintain a reasonable speed, instead of the *HCM2000's* primary service measure of percent time spent following. Drivers in developed areas primarily base their LOS expectations on how close they're traveling relative to their free flow speeds and not so much based on the ability to pass.[7] For example, drivers in a small, developed, area which is posted for 55 mph would primarily like to travel near that speed. Similarly, along a road in a recreational area posted at 45 mph or in a community posted at 40 mph, drivers probably accept that they need to slow down and are quite satisfied to proceed through these areas close to those speeds.

Use of the HIGHPLAN analysis procedure in these areas avoids the problem with the *HCM2000* methodology in which the estimated LOS would likely be worse than what it is perceived as by most drivers. For example, because of the percent time-spent-following criteria that is used, a facility within a rural developed area with an average travel speed that is the same as the posted speed of 50 mph could only have a level of service of C, an unreasonably pessimistic result.

Although created in Florida, HIGHPLAN's[8] developers recommend that it is applicable throughout the U.S., whether to analyze a specific roadway or to conduct systemwide analyses.

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[6] Transportation Research Board, Highway Capacity Manual, Special Report 209 (Washington, D.C.: National Research Council, 2000).
[7] Florida Department of Transportation, Quality/Level of Service Handbook, (2002).
[8] Further information on HIGHPLAN is available at:
http://www11.myflorida.com/planning/systems/sm/los/default.htm.

Within Montpelier, a third LOS analysis methodology was used, the *HCM 2000* urban arterial procedure. The LOS criterion used with this methodology is overall average travel speed along a segment of an urban arterial, which reflects both running time and delay incurred at signalized and stop controlled intersections.

The results of the roadway segment level of service analysis are shown in Figure 8 and Table 2.

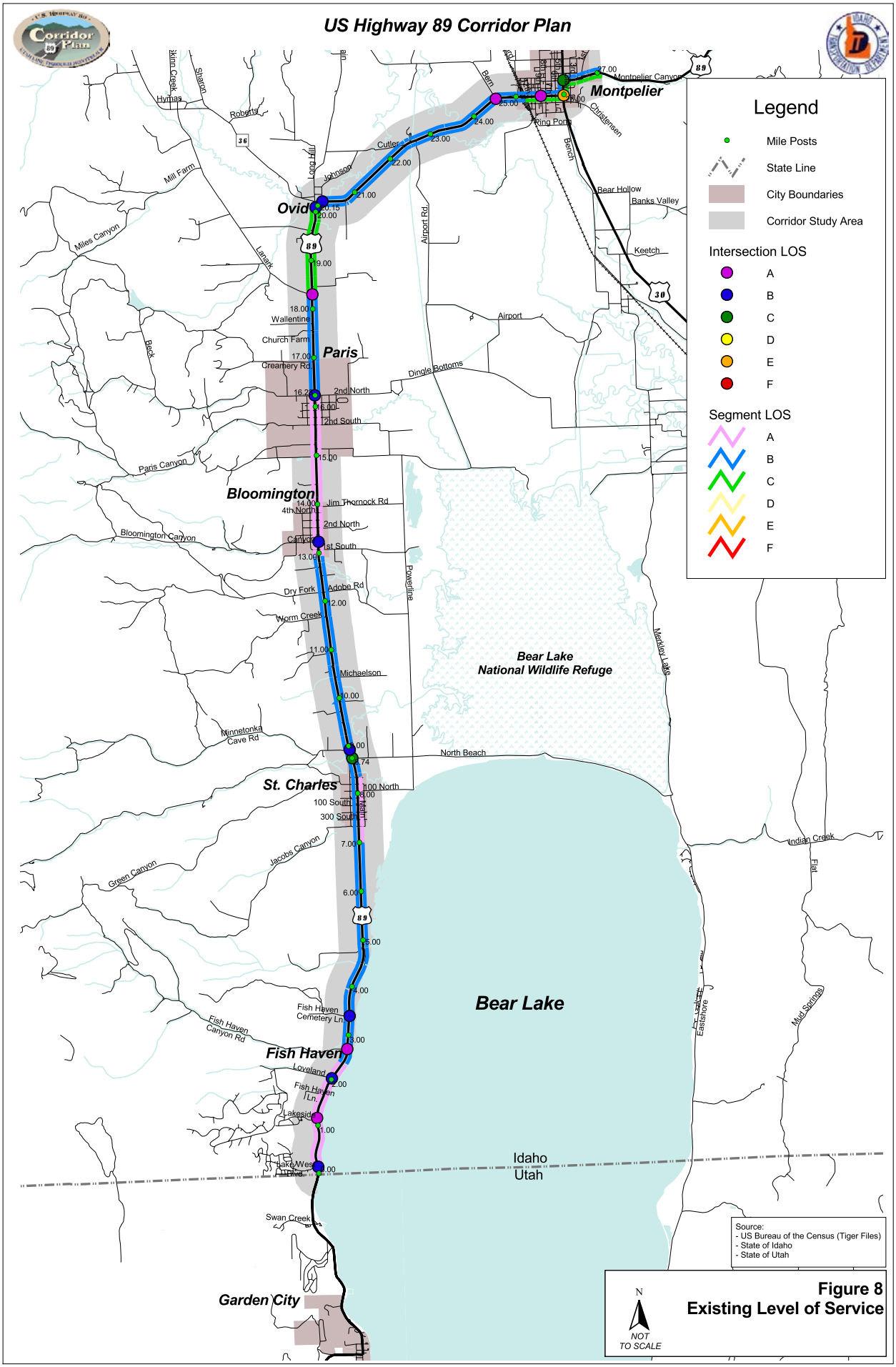
Table 2
Existing Level of Service Summary
US 89 Segments

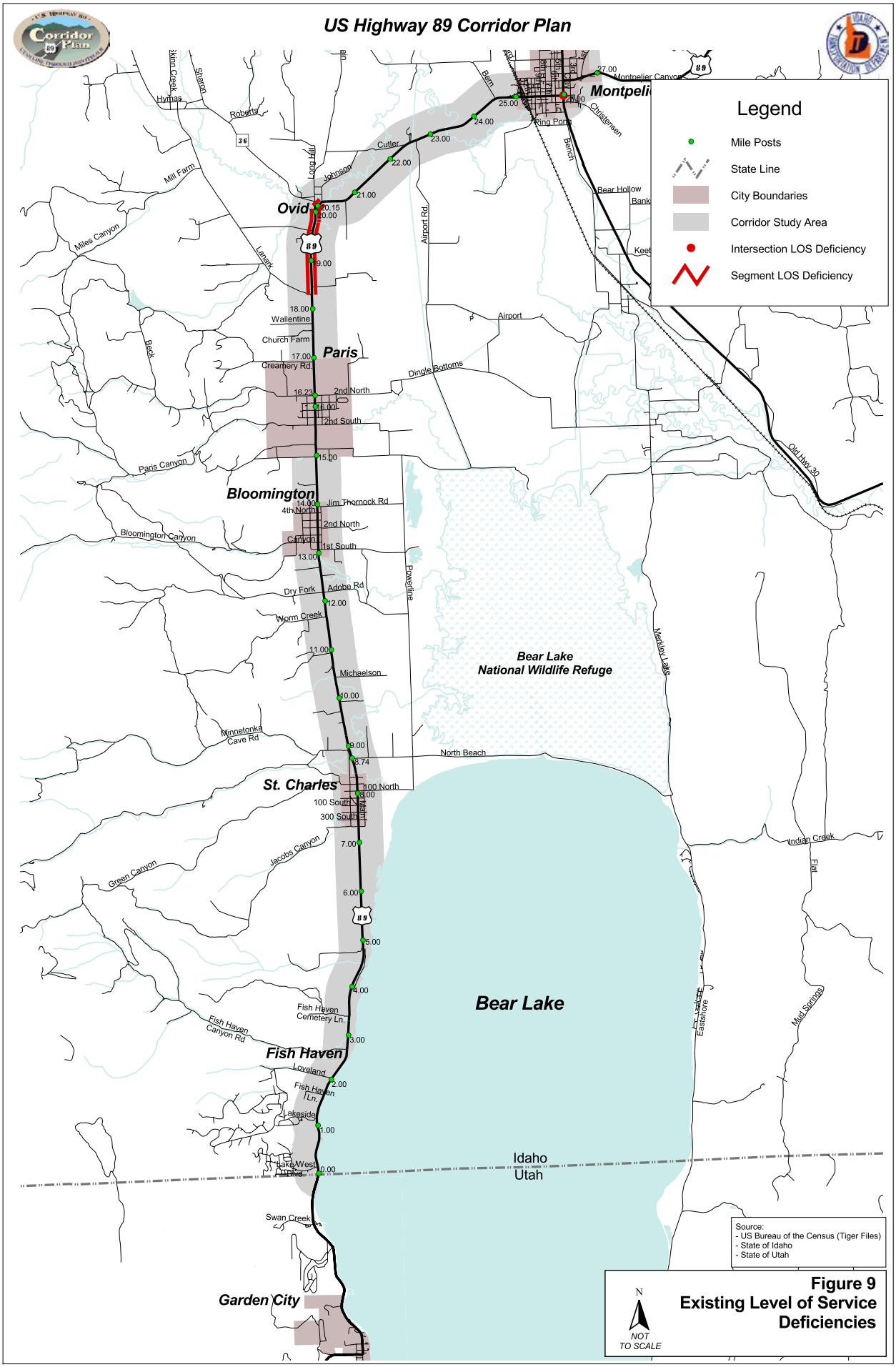
Segment		Existing LOS*	LOS Std.	Deficient?
From	To			
Idaho-Utah state line	Fish Haven Creek	A/A	C	N/N
Fish Haven Creek	Fish Haven n. boundary	B/B	C	N/N
Fish Haven n. boundary	St. Charles s. city limit	A	C	N
St. Charles s. city limit	300 North St. (St. Charles)	A/A	C	N/N
300 North St. (St. Charles)	Bloomington Creek bridge	B	C	N
Bloomington Creek bridge	Bloomington n. city limit	A/A	C	N/N
Bloomington n. city limit	Paris s. city limit	A	C	N
Paris s. city limit	E. 2nd South St. (Paris)	A/A	C	N/N
E. 2nd South St. (Paris)	E. 2nd North St. (Paris)	A/A	C	N/N
E. 2nd North St. (Paris)	Lanark Rd.	B	B	N
Lanark Rd.	Ovid corner	C	B	Y
Ovid corner	12th St. overpass (Mont.)	B	B	N
12th St. overpass (Mont.)	Montpelier e. city limit	C/B	C	N/N

* Double letters indicate level of service by direction (northbound/southbound, eastbound/westbound); single letters indicate level of service for both directions.

Comparison of the LOS estimates with the standards indicate that the only existing deficiency is between Lanark Rd. and Ovid corner, where LOS "C" occurs (see Figure 9 and Table 2). The primary factors contributing to this are the somewhat higher traffic volumes along this segment (roughly 600 vehicles per hour) and the higher percentage of no-passing zones (54%). This substandard segment accounts for roughly 7% of the total lane miles and 7% of the total vehicle miles traveled (VMT) along the corridor.

Several inconsistencies may seem apparent between the LOS values for segments in the rural developed areas and those for segments in the undeveloped areas. For example,


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
Intersection LOS
A
B
C
D
E
F
Segment LOS
A
B
C
D
E
F
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Montpelier Canyon
Ring Porn
Bear Hollow
Banks Valley
Keetch
Airport
Airport Rd
Wallentine
Church Farm
Creamery Rd
2nd North
2nd South
Paris Canyon
Jim Thornock Rd
4th North
2nd North
1st South
Bloomington Canyon
Dry Fork
Adobe Rd
Worm Creek
Michaelson
Ninnetonka Cave Rd
North Beach
100 North
100 South
300 South
Jacobs Canyon
Green Canyon
Fish Haven Cemetery Ln
Fish Haven Canyon Rd
Loveland
Fish Haven Ln.
Lakeside
Lake West
Swan Creek
Indian Creek
Mud Springs
Powerline
Merkley Lakes
Dingle Bottoms
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 8
Existing Level of Service


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
Intersection LOS Deficiency
Segment LOS Deficiency
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 9
Existing Level of Service Deficiencies

LOS "A" is shown for the segment between the Idaho-Utah state line and Fish Haven Creek and LOS "B" is shown between Fish Haven and St. Charles. While the reverse might be expected, this is due to the different level of service criteria that are used for each segment. Between the Idaho-Utah state line and Fish Haven Creek, the "percent of free flow speed" criterion is applied, consistent with most drivers' expectations to maintain a reasonable speed along this segment and not necessarily to pass, while between Fish Haven and St. Charles, the more rigorous criteria of average travel speed and percent time-spent-following are applied, consistent with the higher level of service expectations within this area.

Specific input parameter and input data values for the roadway segment LOS analyses are shown in Appendix B.

Existing Intersection LOS

LOS estimates were also developed for the intersections shown in Figure 8 using 2002 DHV counts. The analysis was performed according to the procedures contained in the *HCM2000*[9] for signalized and unsignalized intersections. These methodologies provide a basis for grading the operational performance of intersections based upon vehicle delay, where LOS A, B, and C are generally good, D represents significant delays, E is approaching capacity, and F is congested (over-capacity). Typically, at two-way stop controlled intersections, the minor street left-turn is the critical movement with the largest delay.

The results of the intersection analysis are shown in Table 3. The only location where the LOS standard is exceeded is at the intersection of Washington St./4th St., where LOS "E" occurs on the eastbound approach. LOS "A" or "B" exists on both the major and minor road approaches for all of the remaining intersections, with the exception of Clay St./4th St., which operates at LOS "C".

Table 3
Existing Level of Service Summary
US 89 Intersections

Intersection		Existing LOS*	LOS Std.	Deficient?
Location	**Control**			
US 89/ Lake West Blvd.	Two-way stop	A/B	C	N/N
US 89/ Lakeside Dr.	Two-way stop	A/A	C	N/N
US 89/ Loveland Ln.	Two-way stop	A/B	C	N/N

[9] Transportation Research Board, Highway Capacity Manual, Special Report 209 (Washington, D.C.: National Research Council, 2000).

Table 3 (cont.)
Existing Level of Service Summary
US 89 Intersections

Intersection		Existing LOS*	LOS Std.	Deficient?
Location	Control			
US 89/ Fish Haven Canyon Rd.	Two-way stop	A/A	C	N/N
US 89/ Fish Haven Cemetery Rd.	Two-way stop	A/B	C	N/N
US 89/ North Beach Rd.	Two-way stop	A/B	C	N/N
US 89/ Minnetonka Cave Rd.	Two-way stop	A/A	C	N/N
US 89/ Bloomington Canyon Rd.	Two-way stop	A/B	C	N/N
US 89/ 2nd North St.(Paris)	Two-way stop	A/B	C	N/N
US 89/ Lanark Rd.	Two-way stop	A/A	B	N/N
US 89/ Ovid corner (s.)	Two-way stop	A/B	B	N/N
US 89/ Ovid corner (n.)	Two-way stop	A/B	B	N/N
US 89/ Bern Rd.	Two-way stop	A/A	B	N/N
Washington St./8th St.	Traffic signal	A	C	N
Washington St./4th St.	Two-way stop[10]	A/E	C	N/Y
4th St./Clay St.	Two-way stop	A/C	C	N/N

* Double letters indicate level of service by movement (major/minor) for unsignalized intersections. Single letter indicates overall level of service for a signalized intersection.

Specific input parameter and input data values for the intersection LOS analyses are shown in Appendix B.

Reported Existing Roadway Capacity Deficiencies

There were only two reported deficiencies related to capacity (see Figure 10 and Appendix A). The first deficiency is the long traffic back-ups that can occur during the summer months on the westbound approach of North Beach Rd. to US 89. This condition was confirmed by the intersection LOS analysis described in the previous section. The second reported deficiency is that the only direct connection to the south from Montpelier is on US 89 via the 12th St. overpass. Although US 30 also serves north-south through traffic and Dingle Rd. provides local access to the south, these routes are not as direct as US 89.

[10] Washington St./4th St. intersection now signalized, but was two-way stop at the time traffic counts were taken.

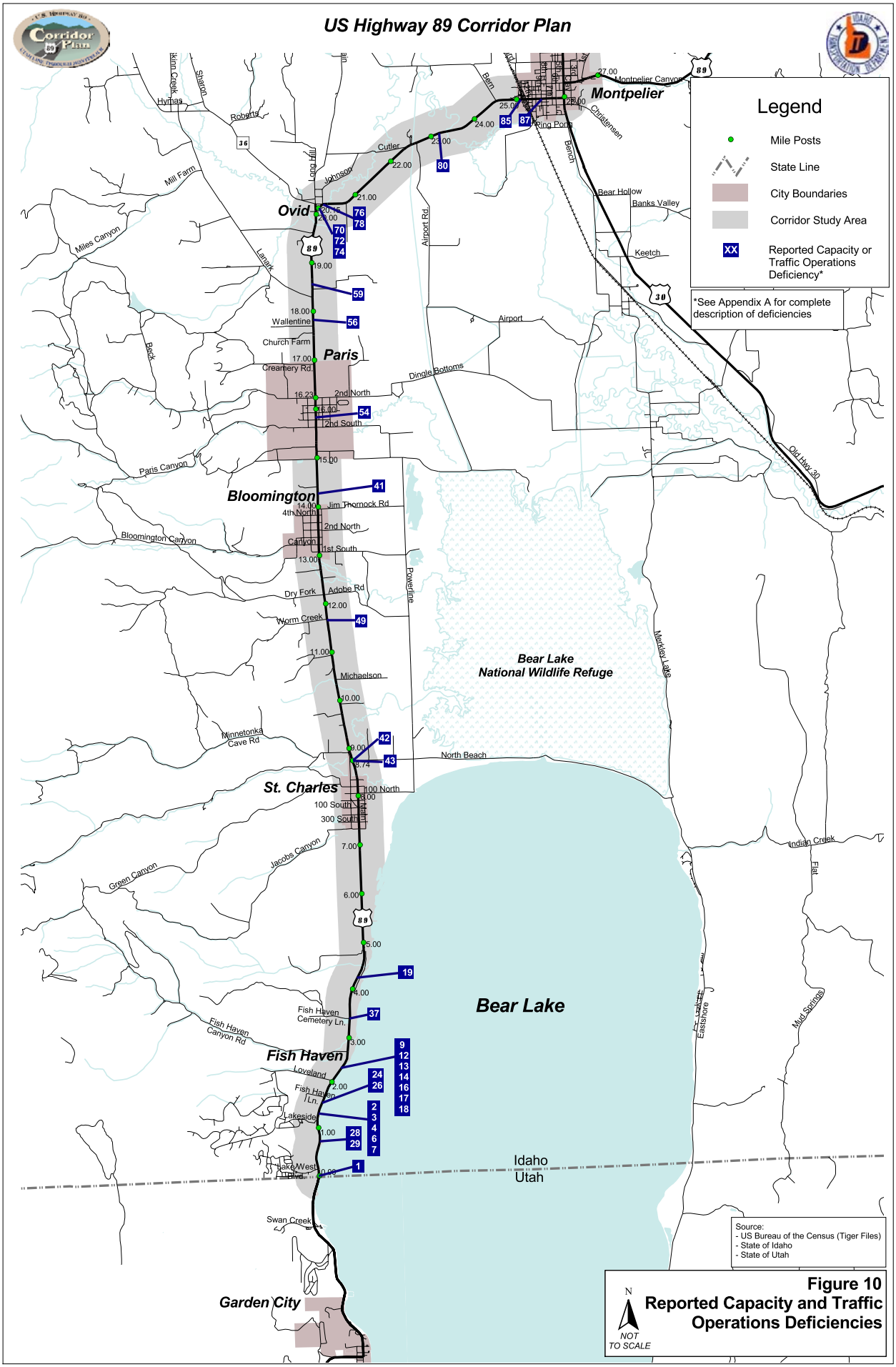


Figure 10
Reported Capacity and Traffic Operations Deficiencies

Existing Traffic Operations

Traffic operations deficiencies were identified for two-lane segments where there are inadequate passing opportunities and intersections where turn lanes are needed.

Existing Traffic Operations on Roadway Segments

As described in the previous section, one of the criteria used in the *HCM2000* level of service methodology for two-lane rural highways is the "percent time-spent-following" (see Appendix C for definition of this term). Since this is also a measure of passing opportunities (higher values of percent time-spent-following imply fewer passing opportunities), those segments with LOS deficiencies may also be considered as having traffic operations deficiencies. The only segment having this deficiency is between Lanark Rd. and Ovid corner, as shown in Figure 11.

Existing Intersection Traffic Operations

Traffic operations deficiencies were also identified for intersections where left-turn lanes or right-turn lanes on US 89 may be needed. Left-turn lanes may be needed to reduce the likelihood of rear-end collisions or prevent the loss of capacity from left-turning vehicles blocking the flow of through traffic. Right-turn lanes may be required to reduce the delay of through vehicles behind right-turning traffic and to increase the convenience of drivers turning right from the higher-speed through traffic stream.

Turn lane deficiencies were estimated using the volume warrants contained in the *ITD Traffic Manual*.[11] The warrants are based on the maximum single-lane DHV, turning DHV, and posted speed limit at an intersection. Thus, as the single-lane DHV and/or turning DHV increases, or as the speed limit increases, the warrant or volume threshold at which a turn lane should be considered decreases.

The results of the deficiency analysis are shown in Tables 4 and 5 and in Figure 11. As can be seen, left- or right-turn lane deficiencies exist at over half of the intersections analyzed. Both left- and right-turn lane deficiencies exist at the intersections of US 89/Lake West Blvd., US 89/North Beach Rd., and US 89/Minnetonka Cave Rd.

Reported Existing Traffic Operations Deficiencies

A majority of the reported traffic operations deficiencies were for the Fish Haven area between the Idaho-Utah state line and the north end of Fish Haven (see Figure 10 and

[11] Idaho Transportation Department, Traffic Manual, (2002).

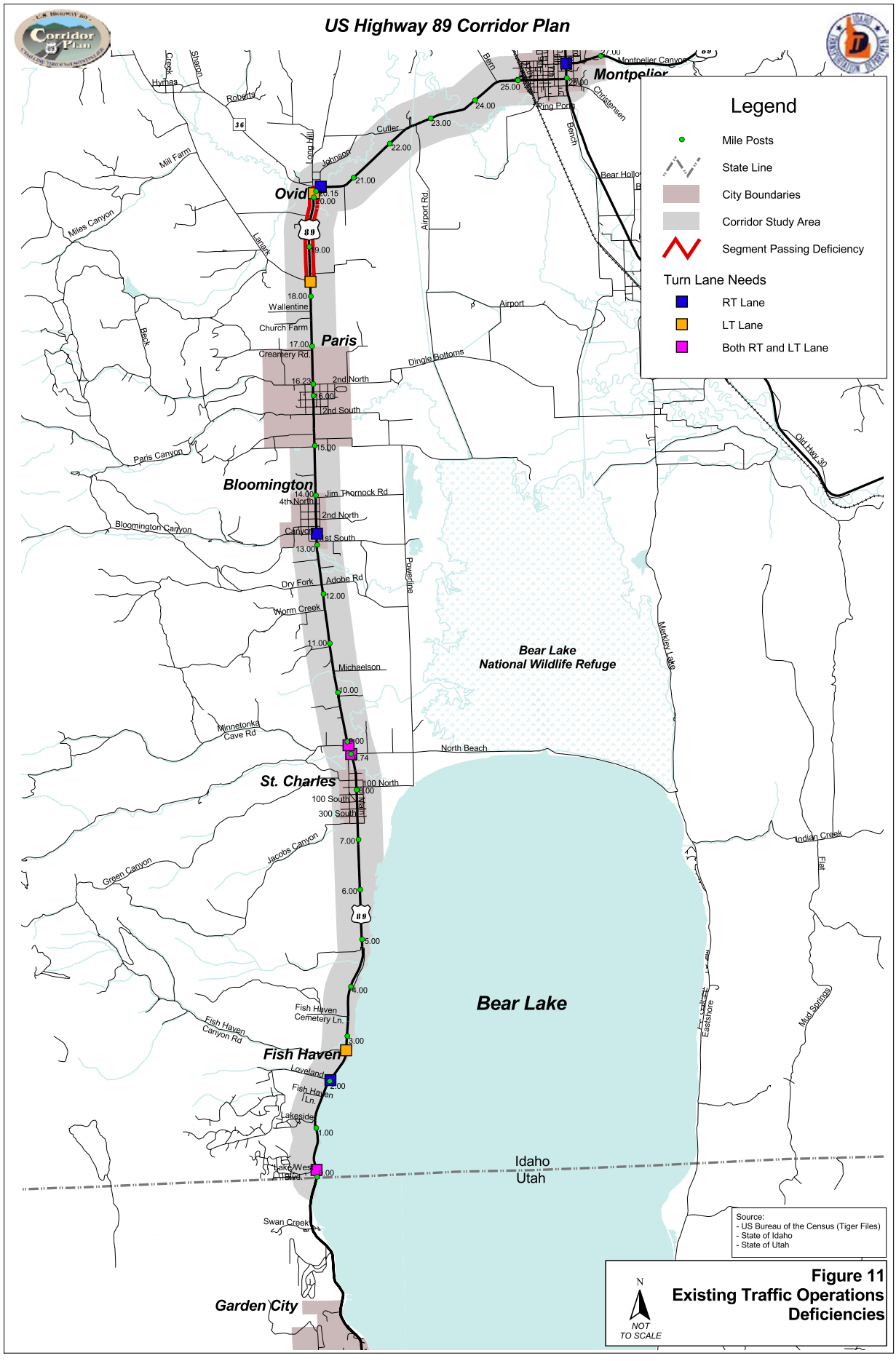


Figure 11
Existing Traffic Operations Deficiencies

Table 4
Existing Left-Turn Lane Deficiency Summary
US 89 Intersections

Intersection	Northbound/Eastbound			Southbound/Westbound		
	LT Vol.	Volume Threshold	Def. ?	LT Vol.	Volume Threshold	Def. ?
US 89/Lake West Blvd.	20	12	Y	N/A	N/A	N/A
US 89/Lakeside Dr.	5	12	N	N/A	N/A	N/A
US 89/Loveland Ln.	7	12	N	N/A	N/A	N/A
US 89/Fish Haven Canyon Rd.	28	14	Y	N/A	N/A	N/A
US 89/Fish Haven Cem. Rd.	5	12	N	N/A	N/A	N/A
US 89/North Beach Rd.	0	12	N	45	12	Y
US 89/Minnetonka Cave Rd.	26	12	Y	N/A	N/A	N/A
US 89/Bloom. Canyon Rd.	10	12	N	1	12	N
US 89/2nd North St. (Paris)	13	15	N	4	14	N
US 89/Lanark Rd.	17	12	Y	N/A	N/A	N/A
US 89/Ovid corner (s.)	49	12	Y	N/A	N/A	N/A
US 89/Bern Rd.	0	12	N	N/A	N/A	N/A

Table 5
Existing Right-Turn Lane Deficiency Summary
US 89 Intersections

Intersection	Northbound/Eastbound			Southbound/Westbound		
	RT Vol.	Volume Threshold	Def. ?	RT Vol.	Volume Threshold	Def. ?
US 89/Lake West Blvd.	N/A	N/A	N/A	10	6	Y
US 89/Lakeside Dr.	N/A	N/A	N/A	3	5	N
US 89/Loveland Ln.	N/A	N/A	N/A	11	5	Y
US 89/Fish Haven Canyon Rd.	N/A	N/A	N/A	9	10	N
US 89/Fish Haven Cem. Rd.	N/A	N/A	N/A	3	6	N
US 89/North Beach Rd.	41	6	Y	1	5	N
US 89/Minnetonka Cave Rd.	N/A	N/A	N/A	18	5	Y
US 89/Bloom. Canyon Rd.	0	5	N	12	6	Y
US 89/2nd North St. (Paris)	9	10	N	7	9	N
US 89/Lanark Rd.	N/A	N/A	N/A	2	6	N
US 89/Ovid corner (n.)	N/A	N/A	N/A	81	5	Y

Table 5 (cont.)
Existing Right-Turn Lane Deficiency Summary
US 89 Intersections

Intersection	Northbound/Eastbound			Southbound/Westbound		
	RT Vol.	Volume Threshold	Def. ?	RT Vol.	Volume Threshold	Def. ?
US 89/Bern Rd.	N/A	N/A	N/A	N/A*	N/A	N/A
Washington St./4th St.	1	25	N	N/A	N/A	N/A
4th St./Clay St.	80	9	Y	24	10	Y

* Westbound right-turn lane already exists.

Appendix A). Nearly all of these problems involve lake-related traffic, including:

- Driveway traffic conflicts, particularly south of Fish Haven Creek;
- Vehicles parked on the roadway and a lack of lake access parking;
- The need for scenic pullouts;
- The need for a center turn lane or passing lanes and/or intersection turn lanes; and
- General congestion.

With regard to driveway traffic conflicts, driveway spacing deficiencies were observed at a number of locations where ITD's minimum 300' spacing standard was not met.[12] Field survey also identified vehicle parking on the shoulders, as well as directly on the lake bottom due to low-water conditions. Several potential locations for scenic pull-outs in the area were identified. The need for intersection turn lanes was verified for the intersections of Lake West Blvd., Loveland Lane, and Fish Haven Canyon Rd. Based on the existing level of service estimates, congestion does not appear to be a significant problem in the Fish Haven area; however the driveway access spacing deficiencies mentioned above contribute to traffic conflicts.

Between Fish Haven and Ovid corner, the primary reported deficiencies were conflicts between through and turning vehicles in the North Beach Rd. area, conflicts between general traffic and farm vehicles and livestock, and difficult winter driving conditions north of Lanark Rd. The need for turn lanes at North Beach Rd. was confirmed both through field survey and the deficiencies analysis described in the previous section.

[12] Idaho Transportation Department, Access Management: Standards and Procedures for Highway Right-of-Way Encroachments, (2002).

A significant reported deficiency at Ovid corner was the frequent driver confusion that occurs at both the south and north intersections. At the north intersection, in particular, this was described as a lack of awareness of the stop sign on the eastbound approach of SH 36 and the difficulty that drivers have in determining whether southbound vehicles on US 89 are turning right onto westbound SH 36 or continuing south on US 89.

There were no significant traffic operations deficiencies reported along the remainder of the corridor. A complete listing of the reported traffic operations deficiencies is provided in Appendix A.

Existing Traffic Safety

ITD maintains the High Accident Location (HAL) system for the identification and analysis of locations on the state highway system with potential safety deficiencies. The system produces separate weighted rankings of intersections and highway segments statewide. The position of a location on the HAL listing is determined by its statewide ranking in three categories:

- Collision frequency – locations that experience more crashes are ranked higher than locations that experience fewer crashes;
- Severity – locations characterized by crashes of greater injury severity and cost to society are ranked higher than locations with less crash severity; and
- Collision rate – locations which have a tendency to experience more collisions than expected for the amount of vehicle travel are ranked higher than locations which do not.[13]

The final HAL listing combines the results of the frequency, severity, and collision rate rankings into a single listing.

Individual listings of the top 200 intersections and highway segments statewide are produced, as well as the top 20 intersections and segments within each ITD district.[14] Within the corridor study area, there are no intersections or segments on either the statewide or District 5 HAL listings.

[13] Idaho Transportation Department, High Accident Location Report Methodology, (2002).
[14] Telephone conversation with Mike Elmer, ITD Office of Highway Safety, on 8/30/02.

Existing Traffic Safety on Roadway Segments

To provide a more comprehensive assessment of overall safety conditions within the study area, two additional safety measures were developed. The accident frequency for roadway segments was calculated as the number of accidents per 100 million vehicle miles traveled (see Appendix C for definition), using accident data for the period 1999 - 2001. These rates are shown in Table 6 and Figure 12, together with a comparison to statewide average rates for similar segments.

Table 6
US 89 Accident Rate Summary - Segments

Segment		Total Acc.*	Accident Rate	Statewide Avg.[15]	Above Avg.?
From	To				
Idaho-Utah state line	Fish Haven n. boundary	6	79.4	289.3	N
Fish Haven n. boundary	St. Charles s. city limit	10	99.3	108.5	N
St. Charles s. city limit	300 North St. (St. Charles)	1	42.4	189.9	N
300 North St. (St. Charles)	Bloomington Creek Bridge	6	80.0	108.5	N
Bloomington Creek Bridge	Bloomington n. city limit	1	58.9	189.9	N
Bloomington n. city limit	Paris s. city limit	2	102.3	108.5	N
Paris s. city limit	E. 2nd North St. (Paris)	4	127.7	359.9	N
E. 2nd North St.	Lanark Rd.	4	98.8	108.5	N
Lanark Rd.	Ovid corner	4	90.4	108.5	N
Ovid corner	12th St. overpass (Montpelier)	6	48.0	108.5	N
12th St. overpass	10th St.	1	90.9	359.9	N
10th St.	4th St.	19	422.4	449.4	N
4th St.	Clay St.	17	629.0	449.4	Y
Clay St.	Montpelier e. city limit	1	67.3	359.9	N

* Total accidents for the three-year period 1999 – 2001.

The highest accident rates along US 89 occur in Montpelier between 10th St. – 4th St. and 4th St. – Clay St. The only segment with an accident rate higher than the statewide

[15] Idaho Transportation Department, Idaho Traffic Collisions 2001, (2002).

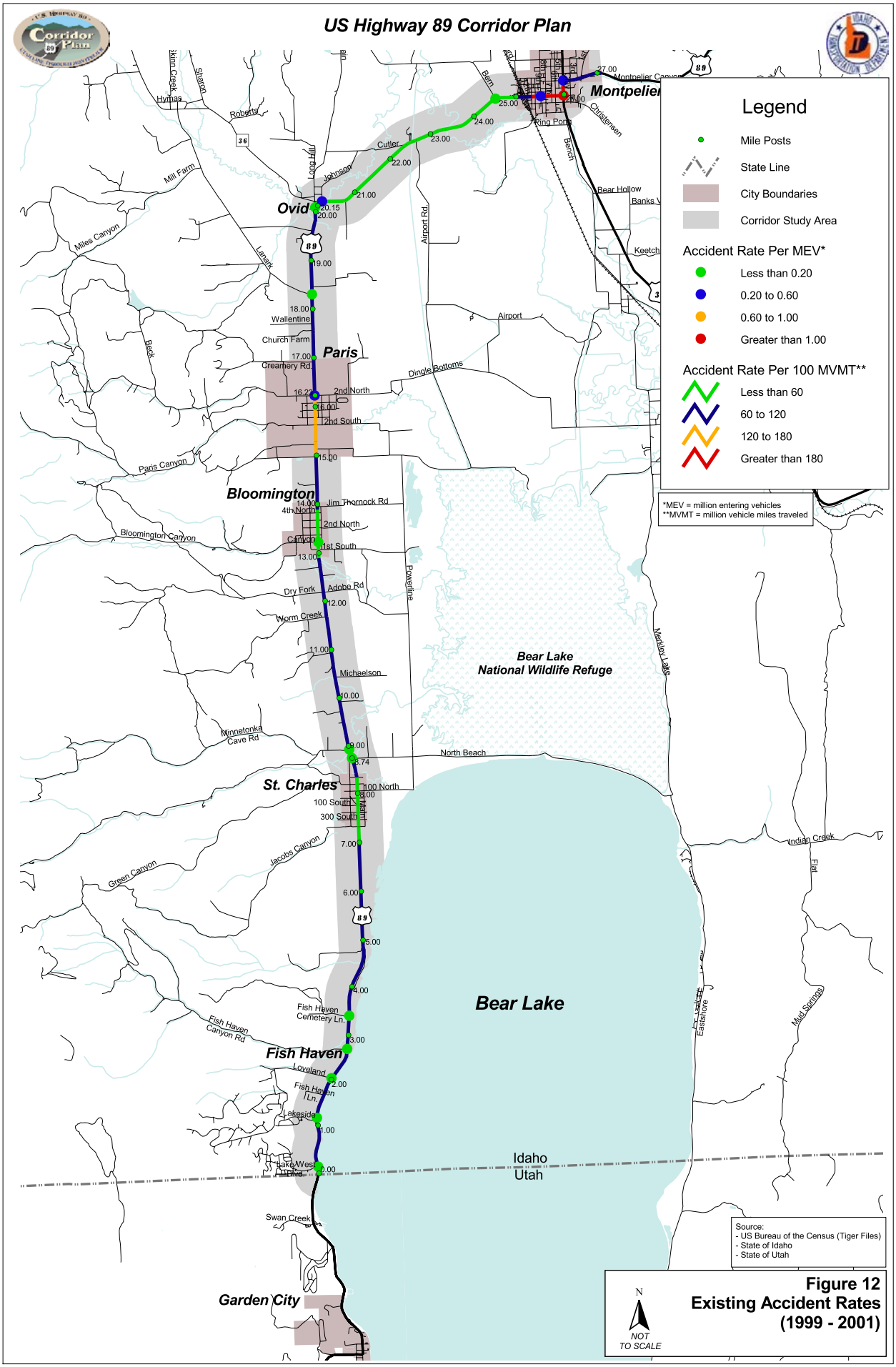


Figure 12
Existing Accident Rates (1999 - 2001)

average is the 4th St. – Clay St. segment. This segment accounts for roughly 1% of the total lane miles and 4% of the VMT along the corridor.

Existing Intersection Traffic Safety

A similar measure for intersections was calculated as accidents per million entering vehicles (MEV), again using accident data for the period 1999 – 2001. These rates are shown in Table 7, together with statewide average rates for similar intersections.

Table 7
US 89 Accident Rate Summary - Intersections

Intersection	Total Accidents*	Accident Rate	Statewide Avg.[16]	Above Avg.?
US 89/Lake West Blvd.	0	0.00	1.13	N
US 89/Lakeside Dr.	0	0.00	1.13	N
US 89/Loveland Ln.	0	0.00	1.13	N
US 89/Fish Haven Canyon Rd.	0	0.00	1.13	N
US 89/Fish Haven Cemetery Rd.	0	0.00	1.13	N
US 89/North Beach Rd.	0	0.00	0.68	N
US 89/Minnetonka Cave Rd.	0	0.00	1.13	N
US 89/Bloomington Canyon Rd.	0	0.00	1.13	N
US 89/2nd North St. (Paris)	1	0.45	1.13	N
US 89/Lanark Rd.	0	0.00	1.13	N
US 89/Ovid corner (s.)	0	0.00	1.13	N
US 89/Ovid corner (n.)	1	0.39	1.13	N
US 89/Bern Rd.	0	0.00	1.13	N
Washington St./8th St.	1	0.20	0.68	N
Washington St./4th St.	12	2.02	0.55	Y
4th St./Clay St.	3	0.54	0.55	N

* Total accidents for the three-year period 1999 – 2001.

As with the roadway segments, all of the intersections are below the statewide average, with the exception of Washington St./4th St., which is well above the average. The higher-than-average accident rate indicates a potential safety need that may be at least partially addressed with the recent signalization improvement at this location.

[16] Information received from Mike Elmer, ITD Office of Highway Safety, on 9/13/02.

Reported Existing Traffic Safety Deficiencies

Reported safety deficiencies are shown in Figure 13. Between the Idaho-Utah state line and the Paris north city limit, nearly all of the reported deficiencies are related to speed limits that are considered too high. In early 2002, the speed limit for most of the 55 mph speed zones along US 89 was increased to 65 mph. A frequent comment was that the new speed limits are too fast, particularly in transition areas or areas with more development, such as north of Fish Haven, the south side of St. Charles, and the north and south sides of Paris.

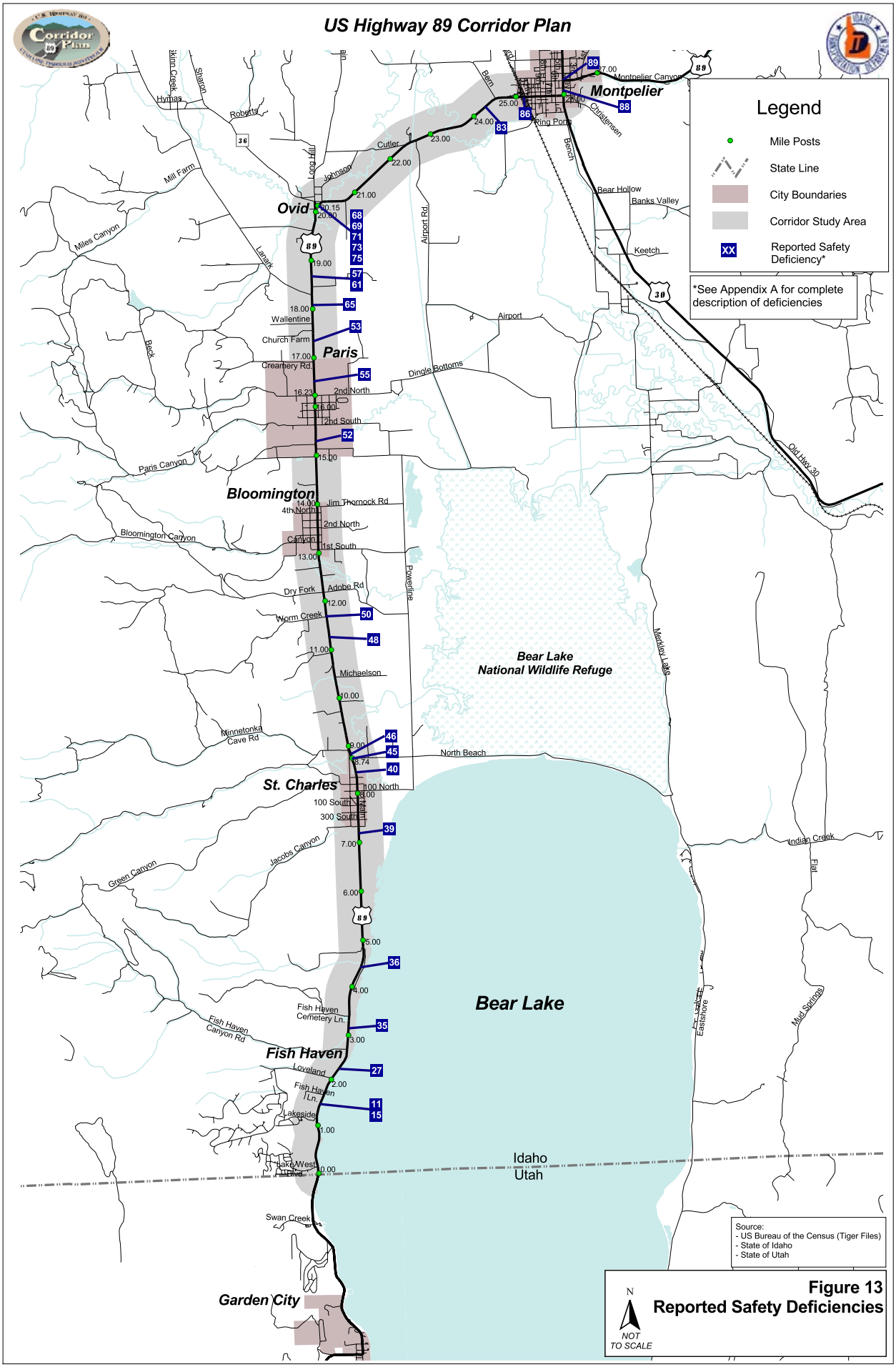
The existing 55 mph speed limit in the vicinity of North Beach Rd. and Minnetonka Cave Rd. was also considered too fast due to the congestion and higher number of turning movements that occur during the peak summer season.

While it will be important to further address these speed limit issues, this would be done most appropriately outside of the corridor planning study as a part of the Regional Transportation Coalition process. This is because speed limits may be regarded as shorter-term policy or management issues, whereas the focus of the corridor study is on longer-term needs and improvements related to the facility itself.

To the north of Paris, another frequently reported deficiency was the vertical curves (rises in the roadway) at several locations that limit sight distance to and from US 89. This condition was confirmed through field survey (see discussion on pg. 57). Another deficiency identified for this area was conflicts between farm vehicles and faster-moving through traffic. Both of these deficiencies may have been contributing factors in a fatal accident near Church Farm Rd. in early 2002 involving farm equipment and a passenger vehicle.

Poor intersection configuration was identified as a potential safety deficiency at Ovid corner. Although neither the north or south intersections are classified as high-accident locations and both have accident rates lower than the statewide average, field survey confirmed that intersection sight distance deficiencies exist at both locations (see discussion on pg. 57). Reconfiguration of the existing intersections or some other geometric improvement may reduce the likelihood of safety problems.

The primary safety deficiency reported for the Montpelier area was the lack of awareness of the stop sign at 4th St./Clay St. by westbound drivers, causing them to proceed into the intersection without stopping.


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
XX Reported Safety Deficiency*
*See Appendix A for complete description of deficiencies
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 13
Reported Safety Deficiencies

Existing Roadway Geometrics

Existing Geometrics on Roadway Segments

Existing geometric deficiencies were identified for all road segments and higher-volume intersections along US 89. For road segments, this was done by comparing existing lane and shoulder widths to the standards contained in the *ITD Highway Design Manual*.[17] As shown in Table 8, the standards vary depending on traffic volume, average running speed, and the percentage of trucks in the traffic stream.

Table 8
ITD Lane and Shoulder Width Standards

AADT	Avg. Running Speed	Less Than 10% Trucks		10% or More Trucks	
		Lane Width	Shoulder Width	Lane Width	Shoulder Width
Less Than 750 veh.	**Under 50 mph**	9 ft.	2 ft.	10 ft.	2 ft.
	50 mph and over	10 ft.	2 ft.	10 ft.	2 ft.
750 – 2,000 veh.	**Under 50 mph**	10 ft.	2 ft.	11 ft.	2 ft.
	50 mph and over	11 ft.	3 ft.	12 ft.	3 ft.
Over 2,000 veh.	**All speeds**	11 ft.	6 ft.	12 ft.	6 ft.

Source: ITD 2002 Design Manual, Appendix C, Figure C-1.

Existing lane widths were obtained from ITD's GRAIL database. The lane width data was verified through field survey checks. Shoulder widths were estimated using sample data collected along the corridor through field survey and the use of ITD videologs.

The existing lane and shoulder width data is shown in Table 9 and Figure 14. All lane widths along the corridor are 12 feet, which exceeds the standard for each segment. Shoulder widths vary considerably, with deficiencies occurring for the following segments (see Figure 15):

- Idaho-Utah state line to St. Charles south city limit;
- Lanark Rd. to the Ovid Creek bridge (south);
- Ovid Creek bridge (south) to Cutler Lane; and

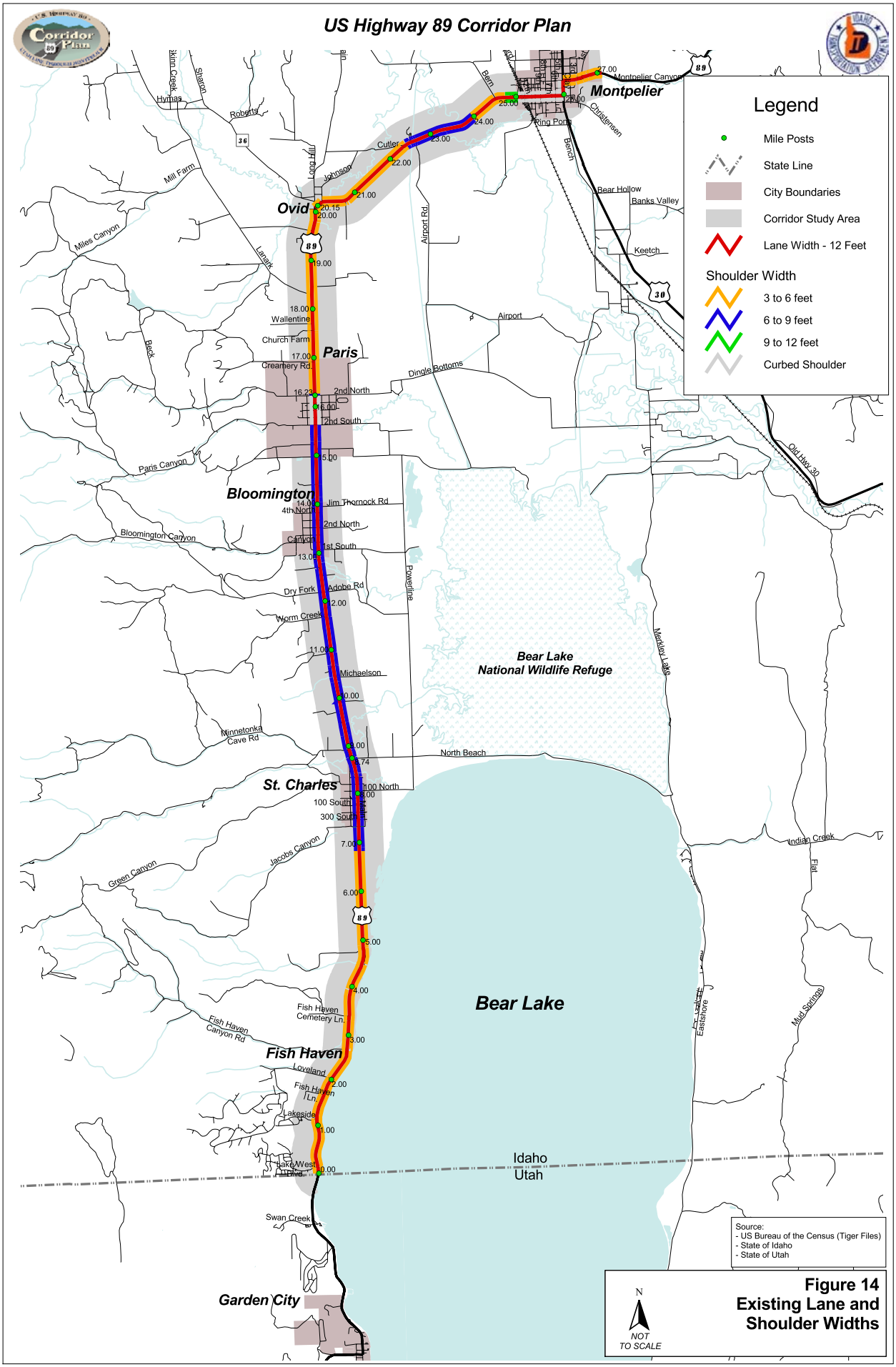
[17] Idaho Transportation Department, Highway Design Manual, (2002).

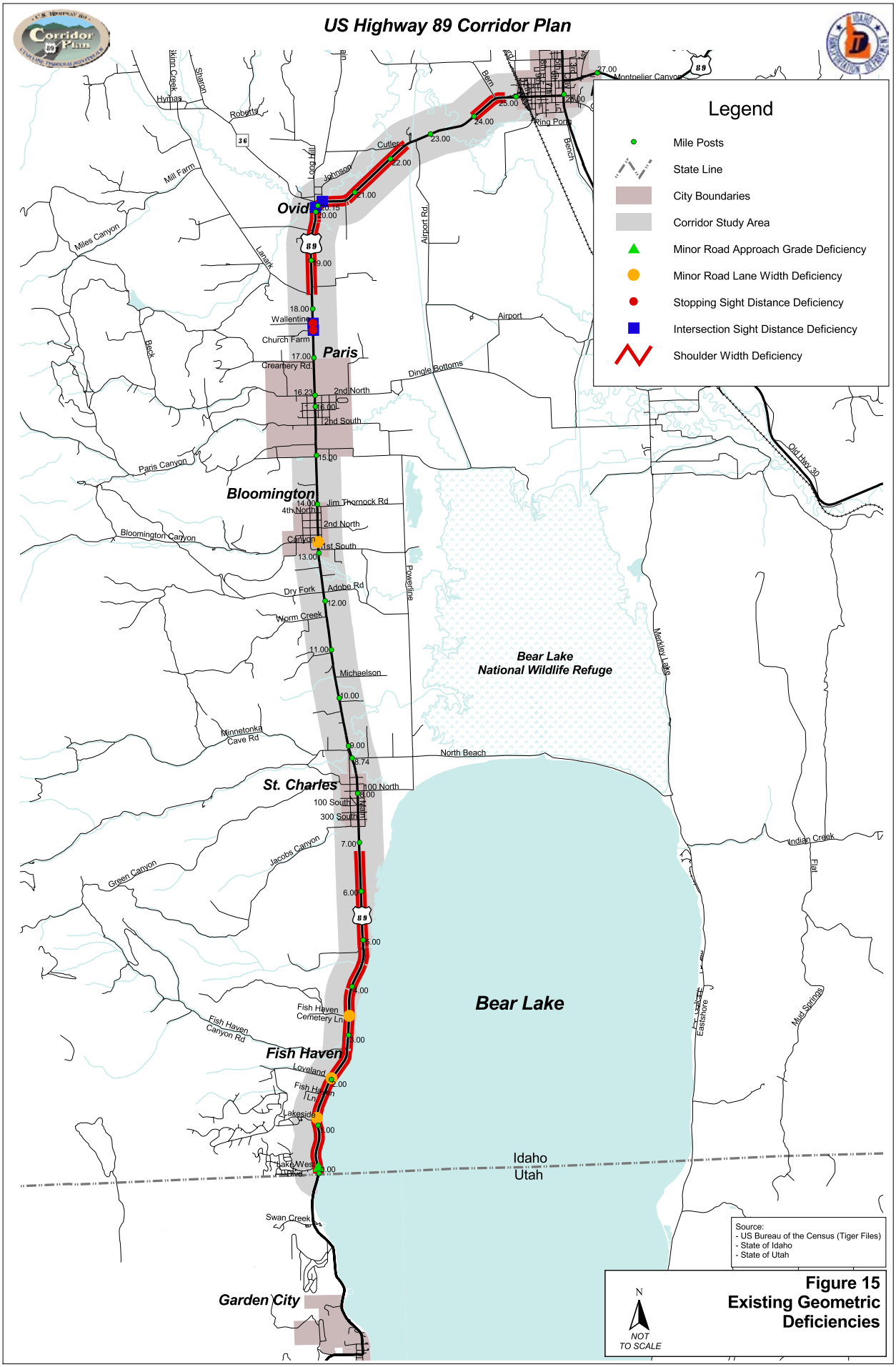
Table 9
Existing Lane and Shoulder Width Summary

From	To	Lane Width			Shoulder Width		
		Average Width	Standard	Def. ?	Average Width	Standard	Def. ?
Idaho-Utah state line	St. Charles s. city limit	12’	11’	N	4.5’	6’	Y
St. Charles s. city limit	300 South St. (St. Charles)	12’	11’	N	8.7’	6’	N
300 South St.	200 South St.	12’	11’	N	8.7’	3’	N
200 South St.	200 North St.	12’	10’	N	8.7’	2’	N
200 North St.	Bloomington Creek bridge	12’	11’	N	8.7’	3’	N
Bloomington Creek bridge	Bloomington n. city limit	12’	10’	N	8.7’	2’	N
Bloomington n. city limit	Paris Creek	12’	11’	N	8.7’	3’	N
Paris Creek	2nd South St. (Paris)	12’	11’	N	8.7’	6’	N
2nd South St. (Paris)	2nd North St.	12’	11’	N	Curbed		
2nd North St.	Creamery Rd.	12’	11’	N	8.7’	3’	N
Creamery Rd.	Lanark Rd.	12’	11’	N	3.5’	3’	N
Lanark Rd.	Ovid Creek bridge (s.)	12’	11’	N	3.5’	6’	Y
Ovid Creek bridge (s.)	Cutler Ln.	12’	11’	N	5.2’	6’	Y
Cutler Ln.	0.5 miles west of Bern Rd.	12’	11’	N	7.8’	6’	N
0.5 miles west of Bern Rd.	R.R. overpass (Montpelier)	12’	11’	N	4.1’	6’	Y
R.R. overpass	Clay St.	12’	11’	N	Curbed		
Clay St.	Montpelier e. city limit	12’	10’	N	3.2’	2’	N

Sources:

1. Average lane width: ITD GRAIL database
2. Average shoulder width: Field survey and ITD videologs


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
Lane Width - 12 Feet
Shoulder Width
3 to 6 feet
6 to 9 feet
9 to 12 feet
Curbed Shoulder
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 14
Existing Lane and Shoulder Widths


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
Minor Road Approach Grade Deficiency
Minor Road Lane Width Deficiency
Stopping Sight Distance Deficiency
Intersection Sight Distance Deficiency
Shoulder Width Deficiency
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Montpelier Canyon
Ring Ports
Airport
Old Hwy 30
Indian Creek Flat
Mud Springs
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 15
Existing Geometric Deficiencies

- 0.5 miles west of Bern Rd. to the 12th St. overpass in Montpelier.

Overall, shoulder width deficiencies exist for 43% of the total lane miles along the corridor and 45% of the total VMT.

In addition to lane and shoulder widths, an assessment of the horizontal alignment (curvature) of US 89 was made. This was done using information on horizontal alignment sufficiency contained in ITD's Highway Performance Monitoring System (HPMS). No deficiencies were identified within the HPMS database, nor through field survey. As mentioned earlier, the vertical alignment, or change in grade, along US 89 is not a significant issue, since the study area is located in relatively flat terrain.

Existing Bridge Geometrics

Geometric deficiencies for bridges along the corridor were identified by comparing existing bridge widths to ITD's bridge width standards,[18] shown in Table 10 below:

Table 10
ITD Bridge Width Standards

Bridge Length	AADT	Standard
Greater than 100 feet	All	Width of approach traffic lanes
Less than 100 feet	0 - 750	Width of approach traffic lanes
	750 – 2000	Width of approach traffic lanes plus 2 feet
	2000 - 4000	Width of approach traffic lanes plus 4 feet
	Over 4000	Width of approach traffic lanes plus 6 feet

Source: Source: ITD 2002 Design Manual, Appendix C

Based on these standards, deficiencies were found for the Ovid Creek (south) and Ovid Creek (east) bridges. While both bridges are at least as wide as the approach traffic lanes, there is less than two feet of additional width on either side of the lanes.

Existing Intersection Geometrics

Geometric deficiencies were analyzed for higher-volume intersections along US 89 and intersections with reported deficiencies. Intersection sight distance, stopping sight distance, and minor road approach grades and lane widths were compared to ITD standards for each location.

[18] Idaho Transportation Department, Highway Design Manual, (2002).

ITD's intersection and stopping sight distance standards are based on the recommendations contained in the American Association of State Highway and Transportation Officials' (AASHTO's) *A Policy on Geometric Design of Highways and Streets*.[19] The stopping sight distance standard is based on vehicle speed and the approach grade of the major road. Adequate stopping sight distance is required for drivers on the major road to stop if an obstruction appears on the road in front of them (e.g., another vehicle turning onto the roadway). The intersection sight distance standard is based on vehicle speed and the approach grade of the minor road. Adequate intersection sight distance is required for drivers turning from the minor road to clearly see oncoming traffic, turn into the traffic stream, and safely accelerate. The largest sight distance requirements are for drivers turning left from the minor road. Also, intersection sight distance requirements are larger than stopping sight distance requirements. Table 11 compares measured sight distances for the intersections along US 89 to the sight distance standards.

Approach lane widths for minor roads intersecting US 89 should be either 9 or 10 feet according to the *ITD Highway Design Manual*.[20] Based on these standards, lane width deficiencies were identified for Bloomington Canyon Rd., Fish Haven Cemetery Rd., Loveland Lane, and Lakeside Dr. Approach grades should be 3 percent or lower for all roadways.[21] The only road along US 89 not meeting this standard is Lake West Blvd.

Reported Existing Geometric Deficiencies

Geometric deficiencies were reported along a majority of the corridor (see Figure 16 and Appendix A). Between the Idaho-Utah state line and Fish Haven Cemetery Rd., the primary reported deficiencies were driveway approach grades that are too steep, narrow shoulder widths, and poor sight distance from driveways and intersections, particularly at the Fish Haven Canyon Rd. intersection. These conditions were confirmed through field survey, other than the poor sight distances. Sight distances were measured at the higher volume intersections in this area and found to meet ITD standards, with the exception of the Fish Haven Cemetery Rd. intersection, where sight distance can be a problem when vehicles are parked to the north and south of the intersection. With no parked vehicles, sight distance standards are met at this location.

Poor intersection sight distance was also a reported deficiency for the eastbound approach of the US 89/North Beach Rd. intersection. Measured sight distances for both directions on this approach were found to meet ITD standards, however.

[19] AASHTO, A Policy on the Geometric Design of Highways and Streets, (2001).
[20] Idaho Transportation Department, Highway Design Manual, (2002).
[21] AASHTO, A Policy on the Geometric Design of Highways and Streets, (2001).

Table 11
Existing Sight Distance Summary
US 89 Intersections

Location	Speed Limit* (mph)	Measured Sight Dist.**	Stopping Sight Distance			Intersection Sight Distance		
			Movement	Standard	Def. ?	Movement	Standard	Def. ?
US 89/ Lake West Blvd.	50	~600’	SB	425'	No	EB LT	555’	No
	50	>800’	NB	425'	No	EB LT	555’	No
US 89/ Lakeside Dr.	50	>800’	SB	425'	No	EB LT	555’	No
	50	>800’	NB	425'	No	EB LT	555’	No
US 89/ Loveland Ln.	50	>800’	SB	425'	No	EB LT	555’	No
	50	>800’	NB	425'	No	EB LT	555’	No
US 89/ Fish Haven Canyon Rd.	35	>800’	SB	250'	No	EB LT	390’	No
	35	>800’	NB	250'	No	EB LT	390’	No
US 89/ Fish Haven Cemetery Rd.	65	>800’	SB	645'	No	EB LT	720’	No
	65	>800’	NB	645'	No	EB LT	720’	No
US 89/ North Beach Rd.	55	>800’	SB	495'	No	WB LT	610’	No
	55	>800’	NB	495'	No	WB LT	610’	No
US 89/ Church Farm Rd.	65	~500’	SB	645'	Yes	EB LT	720’	Yes
	65	>800’	NB	645'	No	EB LT	720’	No
US 89/ Wallentine Rd.	65	>800’	SB	645'	No	EB LT	720’	No
	65	~500’	NB	645'	Yes	EB LT	720’	Yes

Table 11 (cont.)
Existing Sight Distance Summary
US 89 Intersections

Location	Speed Limit* (mph)	Measured Sight Dist.**	Stopping Sight Distance			Intersection Sight Distance		
			Movement	Standard	Def. ?	Movement	Standard	Def. ?
US 89/ Lanark Rd.	65	>800’	SB	645'	No	EB LT	720’	No
	65	>800’	NB	645'	No	EB LT	720’	No
US 89/ Ovid corner (s.)	45	~450’	WB	360'	No	SB RT	500’	Yes
	45	>800’	EB	360'	No	SB RT	500’	No
US 89/ Ovid corner (n.)	45	>800’	WB	360'	No	EB LT	500’	No
	45	~450’	NB	360'	No	EB LT	500’	Yes

* Sight distance standards are based on the traveled speed of the roadway. When 85th percentile speeds are available, they should be used. Otherwise, posted speeds that adequately represent the 85th percentile speeds are used.

** Stopping sight distance and intersection sight distance are measured using the same parameters. They differ by the beginning reference point (driver on the major road for stopping sight distance and driver on the minor road driver for intersection sight distance). Therefore, the same field measurement was applied for both cases.

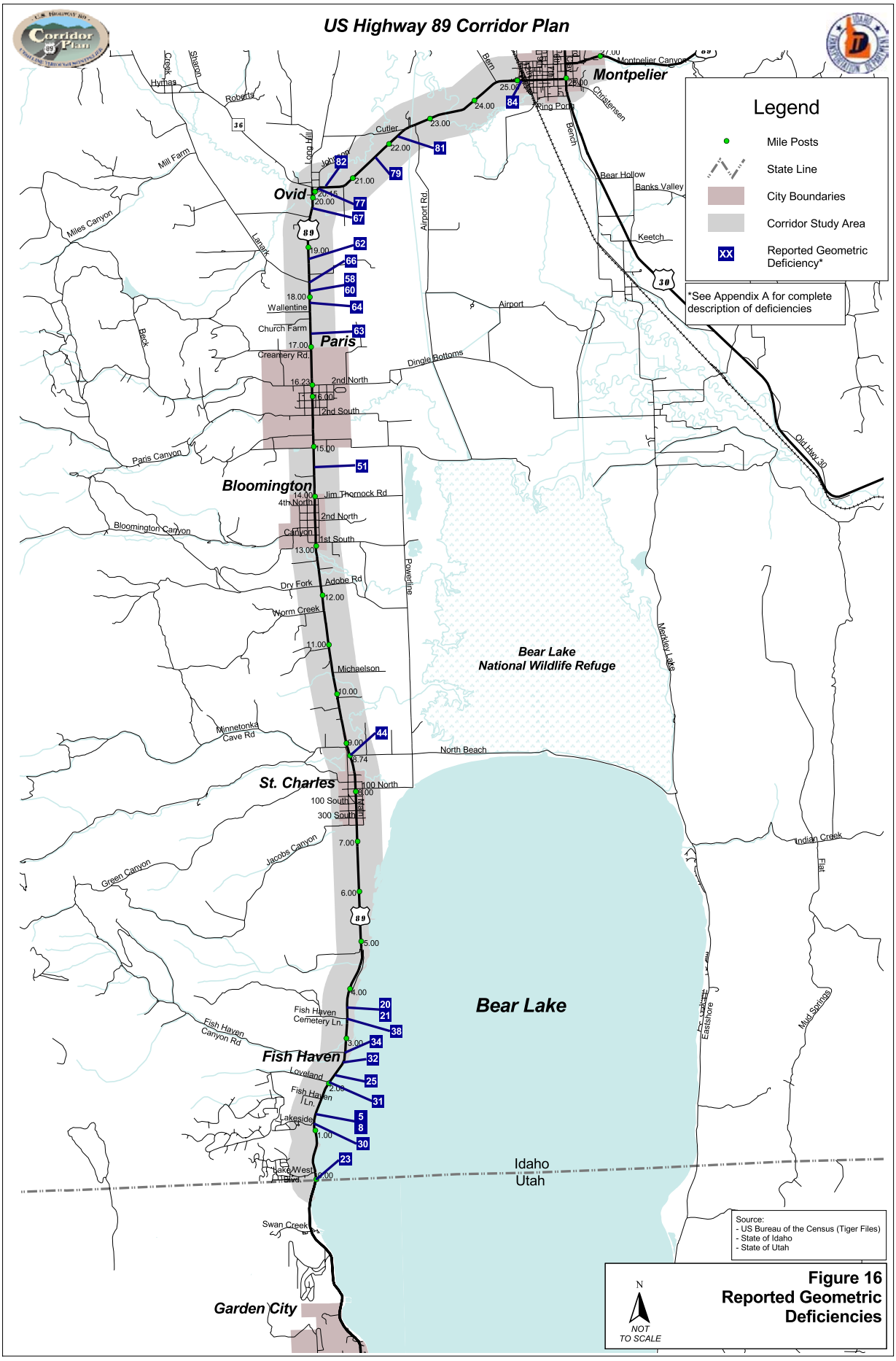


Figure 16
Reported Geometric Deficiencies

A relatively large number of geometric deficiencies were also reported for the segment between Paris and the Ovid corner (north) intersection. Most of these were related to narrow shoulder widths and sight distance problems at several locations. Shoulder width deficiencies were found between Lanark Rd. and the Ovid corner (north) intersection. Intersection and stopping sight distance deficiencies caused by vertical curves along US 89 were also found at Wallentine Rd. and Church Farm Rd. north of Paris. Although intersection and stopping sight distance standards are met at Lanark Rd., another type of sight distance problem exists here. Because this intersection is located at the crest of a vertical curve on US 89, northbound drivers who start their left-turn onto Lanark Rd. prior to the curve have difficulty seeing oncoming southbound vehicles. This problem is exacerbated by the higher speeds (65 mph speed limit) in this area.

Along the remainder of the corridor, the primary reported deficiency was narrow shoulder widths between the Ovid corner (north) intersection and Montpelier. Narrow shoulder widths were identified within this section between the Ovid corner (north) intersection and Cutler Ln.

Existing Bicycle and Pedestrian Conditions

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Existing sidewalks and off-street trails within the corridor study area are shown in Figure 17. There are sidewalks along US 89 in Paris and Montpelier, where curb and gutter-type construction exist. There are no striped bike lanes at any point along US 89. Off-street trails connect Lake West Boulevard in the Fish Haven area to Swan Creek in Utah.

EXISTING BICYCLE AND PEDESTRIAN VOLUMES

Bicycle and pedestrian volumes were counted as part of the vehicle turning movement counts conducted in July 2002. Design hour bicycle and pedestrian volumes at each of the study intersections are shown in Figure 18. As can be seen, this activity is concentrated primarily in the developed areas, such as Fish Haven and Montpelier. Because of the recreational and scenic character of the study area, however, another component of bike travel demand is longer-distance, through bike trips between points north and south of the area.

COMMITTED AND PLANNED BICYCLE AND PEDESTRIAN IMPROVEMENTS

No specific bicycle or pedestrian improvements are included for the corridor in ITD's Statewide Transportation Improvement Plan.[22] The *US 89 Pathway Reconnaissance*

[22] Idaho Transportation Department, Statewide Transportation Improvement Program, (2002).

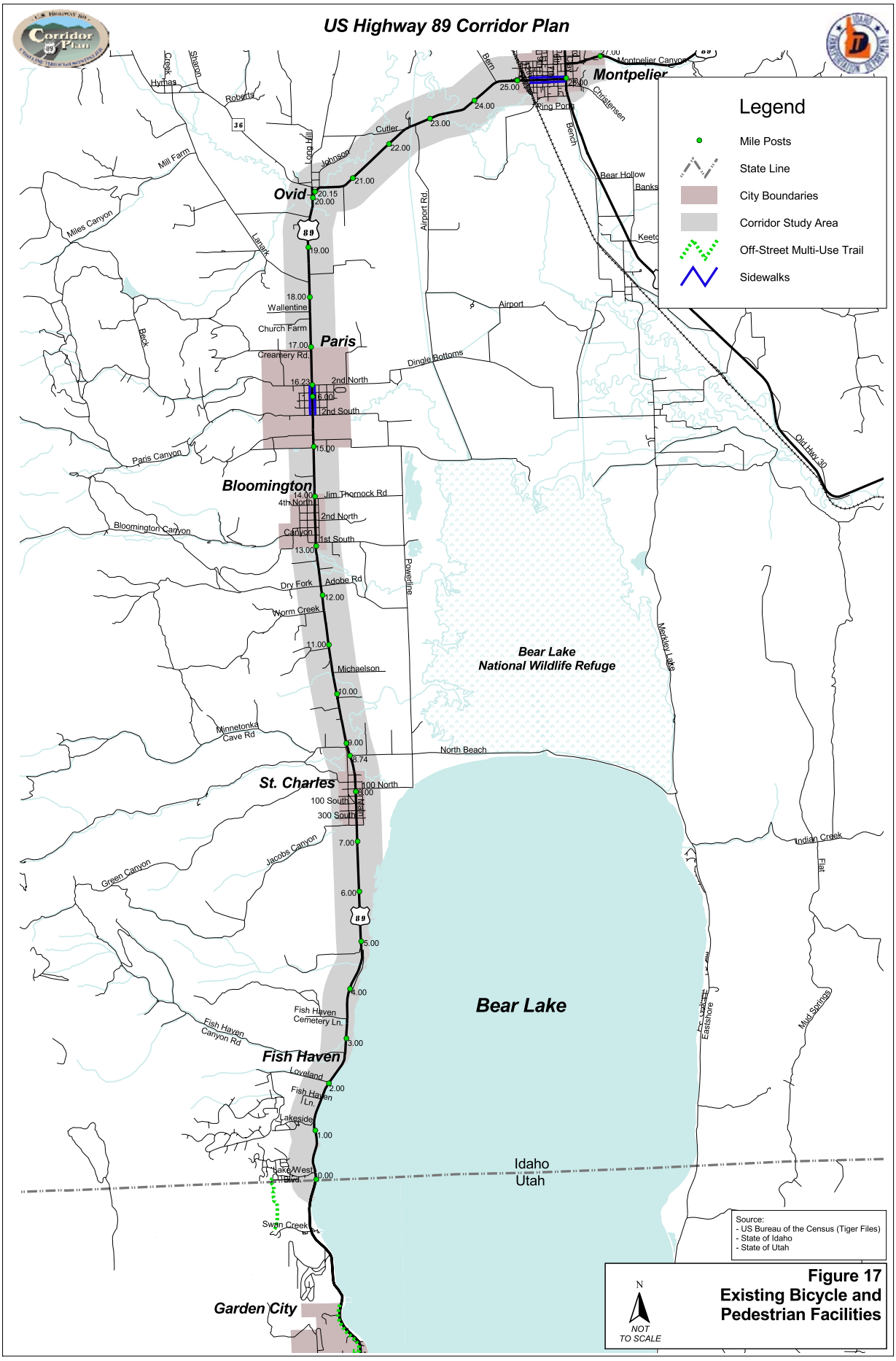


Figure 17
Existing Bicycle and Pedestrian Facilities

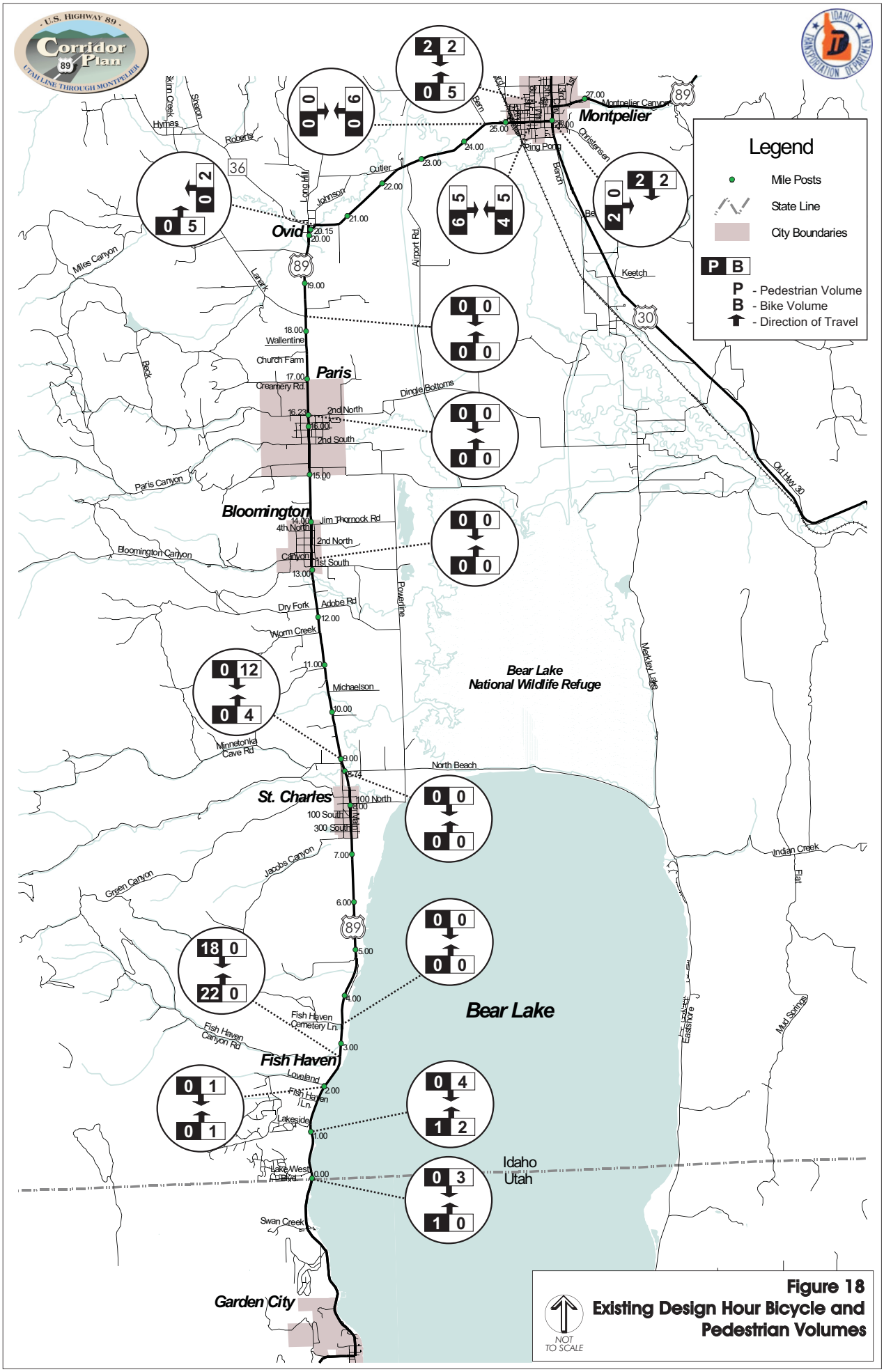


Figure 18
Existing Design Hour Bicycle and Pedestrian Volumes

Study,[23] however, recommends that a shared-use path should be constructed on the west side of US 89 between the Utah state line and Minnetonka Cave Rd. In addition, the Bear Lake County Comprehensive Plan[24] identifies a bicycle path around Bear Lake as an issue for consideration.

EXISTING BICYCLE AND PEDESTRIAN NEEDS

ITD policy requires that bicycle and pedestrian facilities be considered along recreational routes.[25] Based on the existing bicycle travel demand, not only in the Fish Haven area but along the entire corridor, some type of bicycle facility is needed.

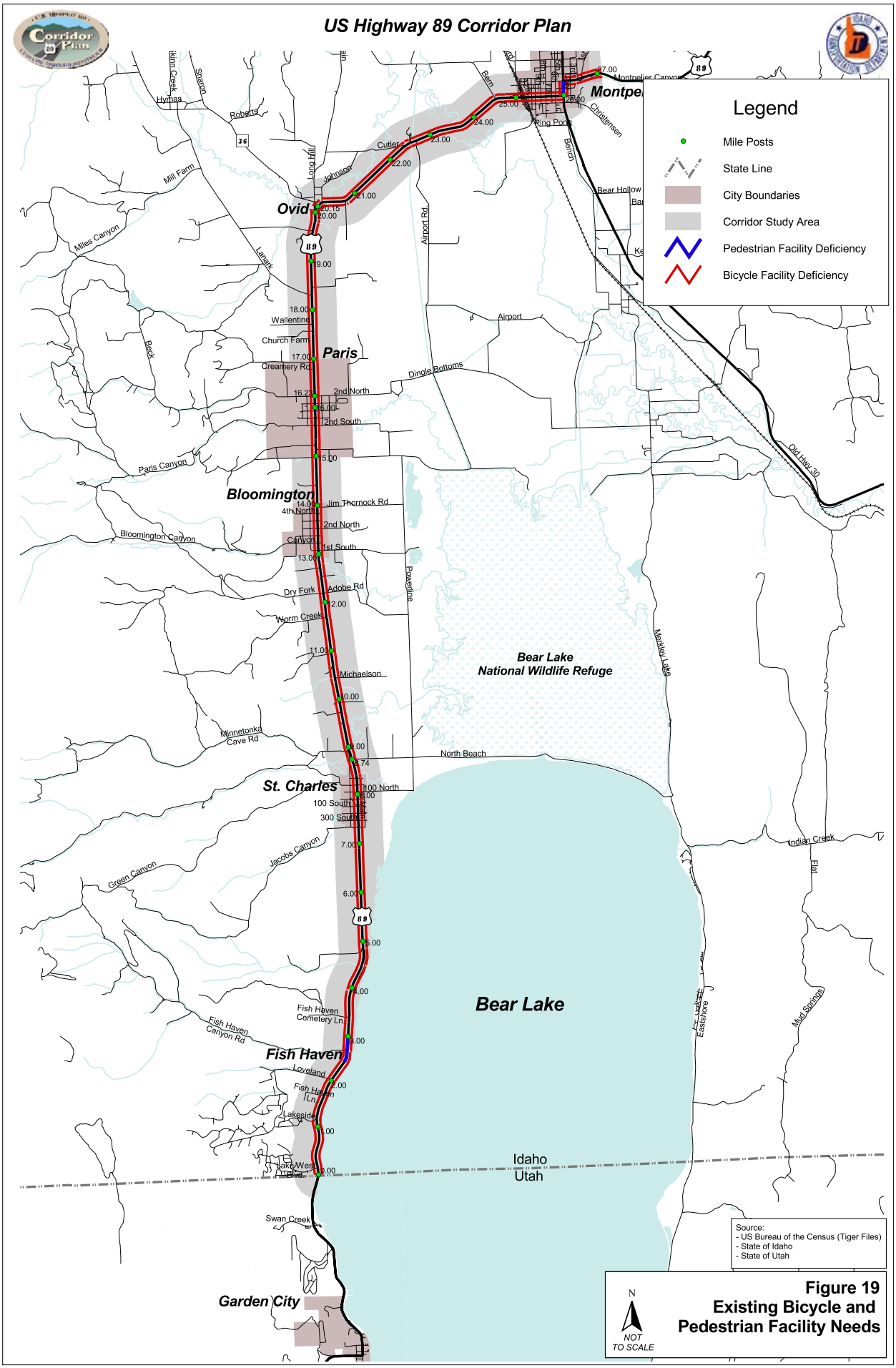
ITD's policy for the construction of pedestrian facilities contained in the *Idaho Bicycle and Pedestrian Plan*[26] states that "pedestrian paths in suburban or rural areas shall be considered when a need is shown, such as proximity to schools or recreation areas". Along the corridor, all of the schools are located outside of the rural area in the communities of Paris and Montpelier. In the Bear Lake area, however, there are several attractions, including the North Beach and Lake West Beach recreational areas and a small commercial area in Fish Haven at the intersection of US 89/Fish Haven Canyon Rd. A typical pedestrian walking distance of ¼ mile was used to determine the need for pedestrian connections to these attractions. No deficiencies were found for the beach areas, since for North Beach there is no residential development within walking distance, and for Lake West Beach all of the nearby housing is directly served by private lake access. A deficiency was identified, however, for the commercial area in Fish Haven, because there are no pedestrian facilities connecting it to the nearby recreational housing development.

Additionally, there is a lack of pedestrian facilities along US 89/US 30 in Montpelier between Washington St. and Clay St. This may be considered as a deficiency because of the commercial character of this area.

Figure 19 shows the existing bicycle and pedestrian facility deficiencies along the corridor.

There were also several reported bicycle and pedestrian deficiencies along US 89 between the Idaho-Utah state line and Paris (see Figure 20 and Appendix A). In the Fish Haven area, these include the need for a bike facility extending south to the existing bike trail at Lake West Blvd. and north to North Beach Rd. (or beyond). A reported location

[23] Idaho Tranaportation Department, US 89 Pathway Reconnaissance Study, (2005).
[24] Bear Lake County Planning and Zoning Commission, Bear Lake County Comprehensive Plan 2025, (2002).
[25] Idaho Transportation Department, Idaho Bicycle and Pedestrian Plan, (1995).
[26] Idaho Transportation Department.


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
Pedestrian Facility Deficiency
Bicycle Facility Deficiency
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 19
Existing Bicycle and Pedestrian Facility Needs

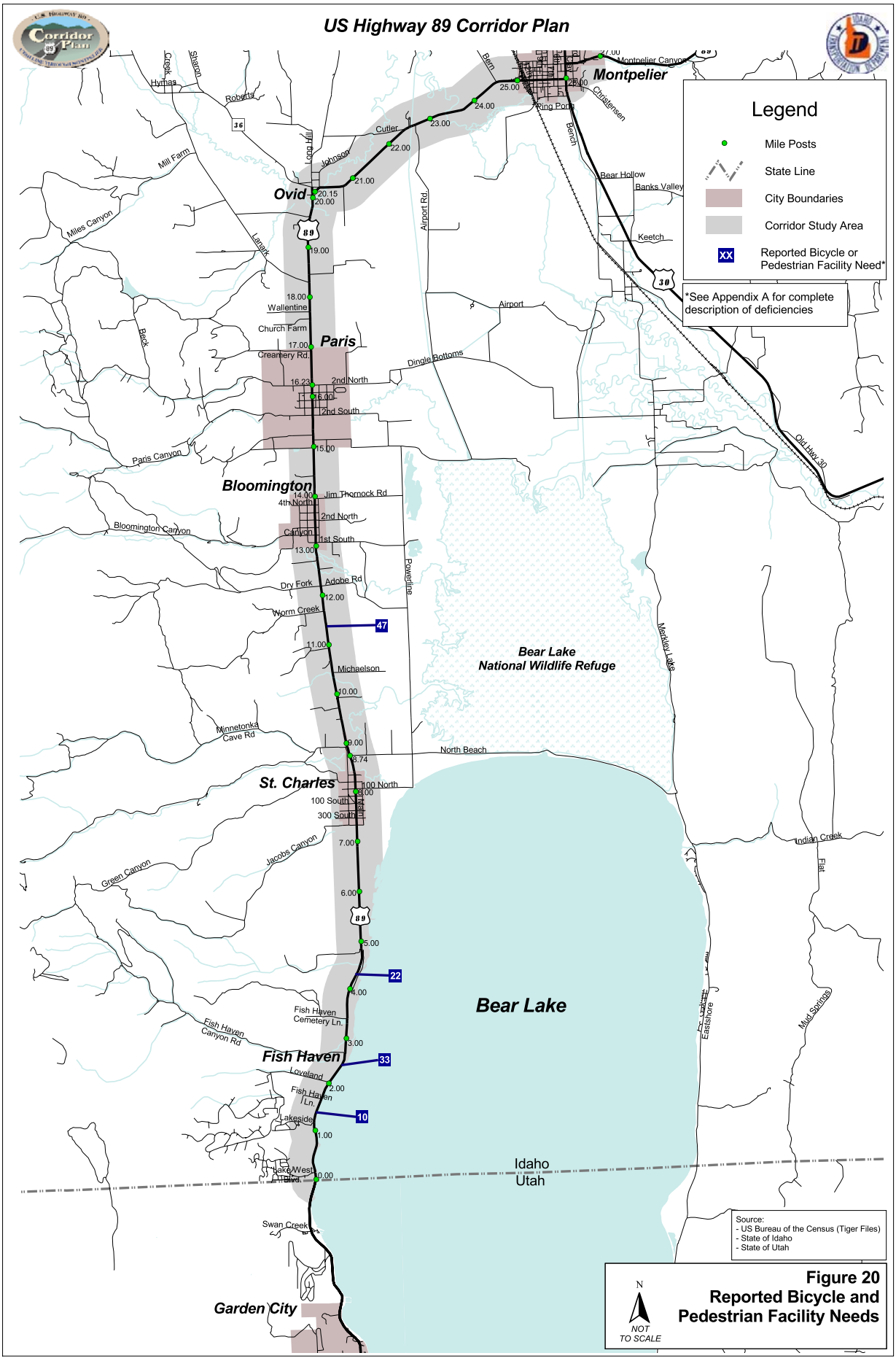


Figure 20
Reported Bicycle and Pedestrian Facility Needs

deficiency was the need for a wider bridge at Fish Creek in Fish Haven to safely accommodate bicyclists and pedestrians.

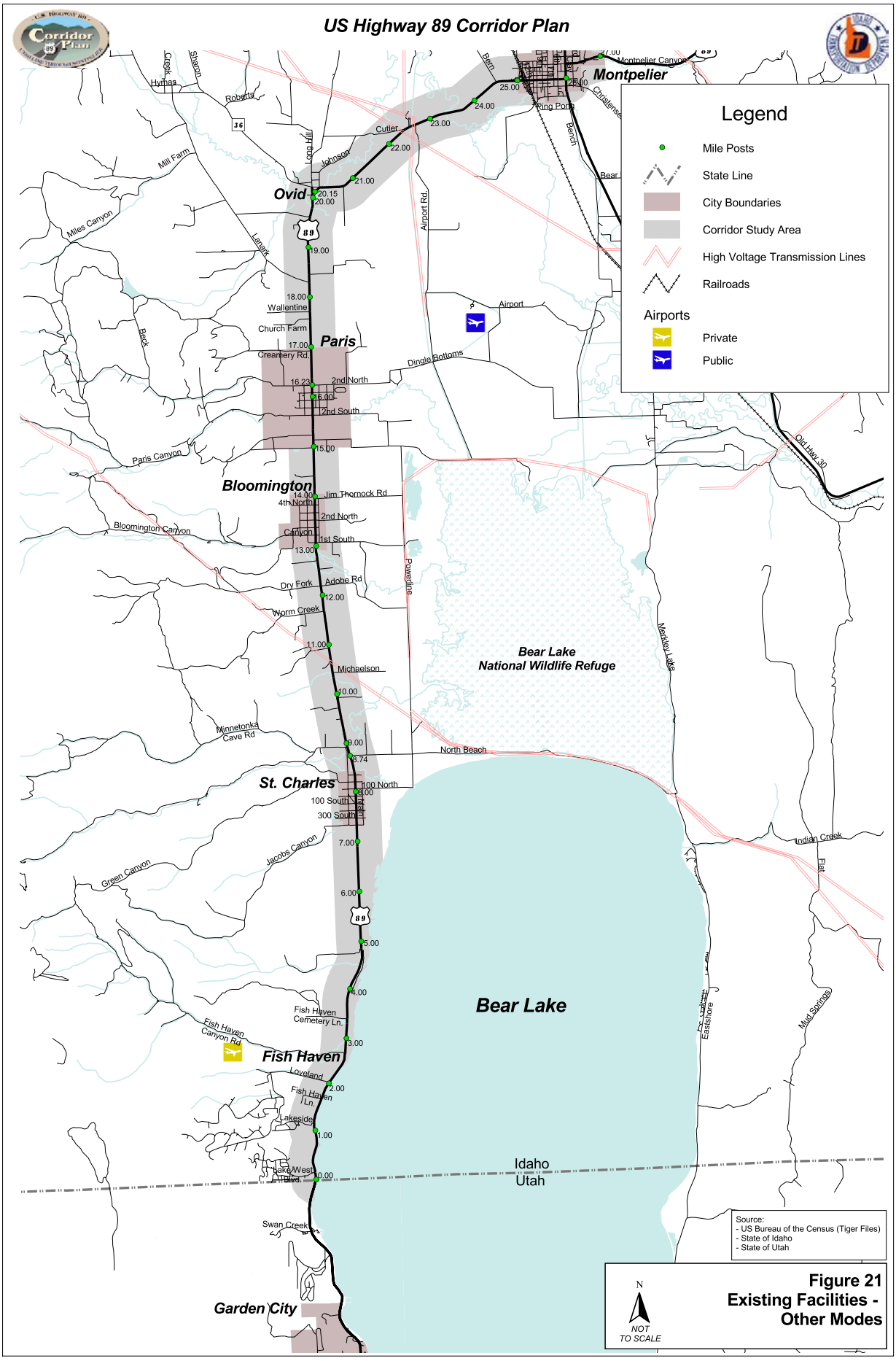
Existing Conditions for Other Modes

Other transportation modes within the corridor study area are rail, air, water, and power transmission lines. They primarily support the movement of goods rather than people.

Facility locations for these modes are shown in Figure 21. Union Pacific operates a freight rail line that passes beneath US 89 on the west side of Montpelier. This is one of the main rail lines in the state, connecting through southern Idaho to Oregon and Wyoming. It carries over 20 million gross ton miles of freight annually, comprised primarily of non-metallic minerals and chemical products derived from the phosphate mining and chemical production activity in the area, as well as farm products.[27] The Bear Lake County airport is a general aviation airport located three miles east of Paris. It has four runways and serves an average of 84 aircraft operations per week.[28] Additionally, there is a private airstrip located near Fish Haven off of Fish Haven Canyon Rd. that is owned by the Lazy M Ranch but currently not used. There are two major high-voltage transmission lines entering Bear Lake County from Wyoming that cross US 89 between St. Charles and Bloomington and between Ovid corner and Montpelier. Bear Lake is the only navigable waterway within the study area and serves recreational boat use only.

No existing needs or committed or planned improvements were identified in the *Idaho Transportation Plan*[29] or specific modal plans for any of these other modes.

[27] Idaho Transportation Department, Idaho State Rail Plan, (1996).
[28] AirNav, LLC, (2003), airport information, URL: http://airnav.com/airports/, visited January 22, 2002.
[29] Idaho Transportation Department, Idaho Transportation Plan, (1995).


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
High Voltage Transmission Lines
Railroads
Airports
Private
Public
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 21
Existing Facilities -
Other Modes

Local Transportation Plans

A review of local transportation plans was also conducted as a part of the existing transportation conditions analysis.

The *Bear Lake County Transportation Plan* was completed in January 2003.[30] The focus of the plan is on maintenance of the existing county roadway system, as stated in the plan: "Ensuring adequate funding for the maintenance of the existing system is fundamental to future planning for the transportation system. The plan's goals and objectives establish a priority for roadway surface maintenance, as contrasted with improvement or expansion of the roadway network". As such, there are no provisions for county facilities within the plan that would affect future operations along the corridor.

The *Oregon Trail – Bear Lake Scenic Byway Corridor Management Plan*,[31] completed in June 2001, includes the portion of US 89 extending from the Utah state line to US 30 in Montpelier, as well as the portions of US 30 and SH-34 from Montpelier to Soda Springs. a highway. The plan was developed as a part of the National Scenic Byways Program, established in 1991 with the passage of the Intermodal Surface Transportation Enhancement Act (ISTEA) with the purpose of developing a national network of scenic roadways. As defined in the *Federal Register*, a scenic byway is "a public road having special scenic, historic, recreational, cultural, archaeological, and/or natural qualities that have been recognized as such through legislation or some other official declaration".[32] Further, a scenic byway corridor management plan is defined as "a written document that specifies the actions, procedures, controls, operational practices, and administrative strategies"[33] to maintain the scenic, cultural, historic, recreational, archeological and natural qualities of the scenic byway.

Essentially then, the *Oregon Trail – Bear Lake Scenic Byway Corridor Management Plan* is a description of the byway and surrounding areas, with ideas on how the visitor's experience could be enhanced and providing support for tourism and economic development. Thus, while the byway plan includes improvements along US 89 specifically to enhance the visitor's experience, the *US 89 Corridor Plan* is more comprehensive, addressing existing and future transportation needs within the corridor area in general. Some of the improvements recommended within the byway plan include:

- Provision of guide and byway signs to identify byway sites;
- Establishment of interpretive sites, including a Bear Lake overlook;

[30] Bear Lake County, Bear Lake County Transportation Plan, (2003).
[31] Oregon Trail – Bear Lake Scenic Byway Management Team, Oregon Trail – Bear Lake Scenic Byway Corridor Management Plan, (2001).
[32] Federal Register, National Scenic Byways Program, (1995).
[33] Federal Register.

- Development of a bicycle and pedestrian system from the Utah state line to St. Charles Canyon along US 89, including widening of the roadway and shoulders;
- Development of a bike trail around Bear Lake, connecting to US 89 and pathways in Utah; and
- Geometric improvements to the curve and SH-36 intersection along US 89 at Ovid Corner, specifically the lengthening of the curve radius to improve the design speed and configuration of the intersection.

The Bear Lake overlook, bicycle and pedestrian improvements along US 89, and Ovid Corner improvements are all identified as recommended improvements within Section V.

Future Transportation Conditions

Future Roadway Conditions

TRAFFIC PROJECTIONS

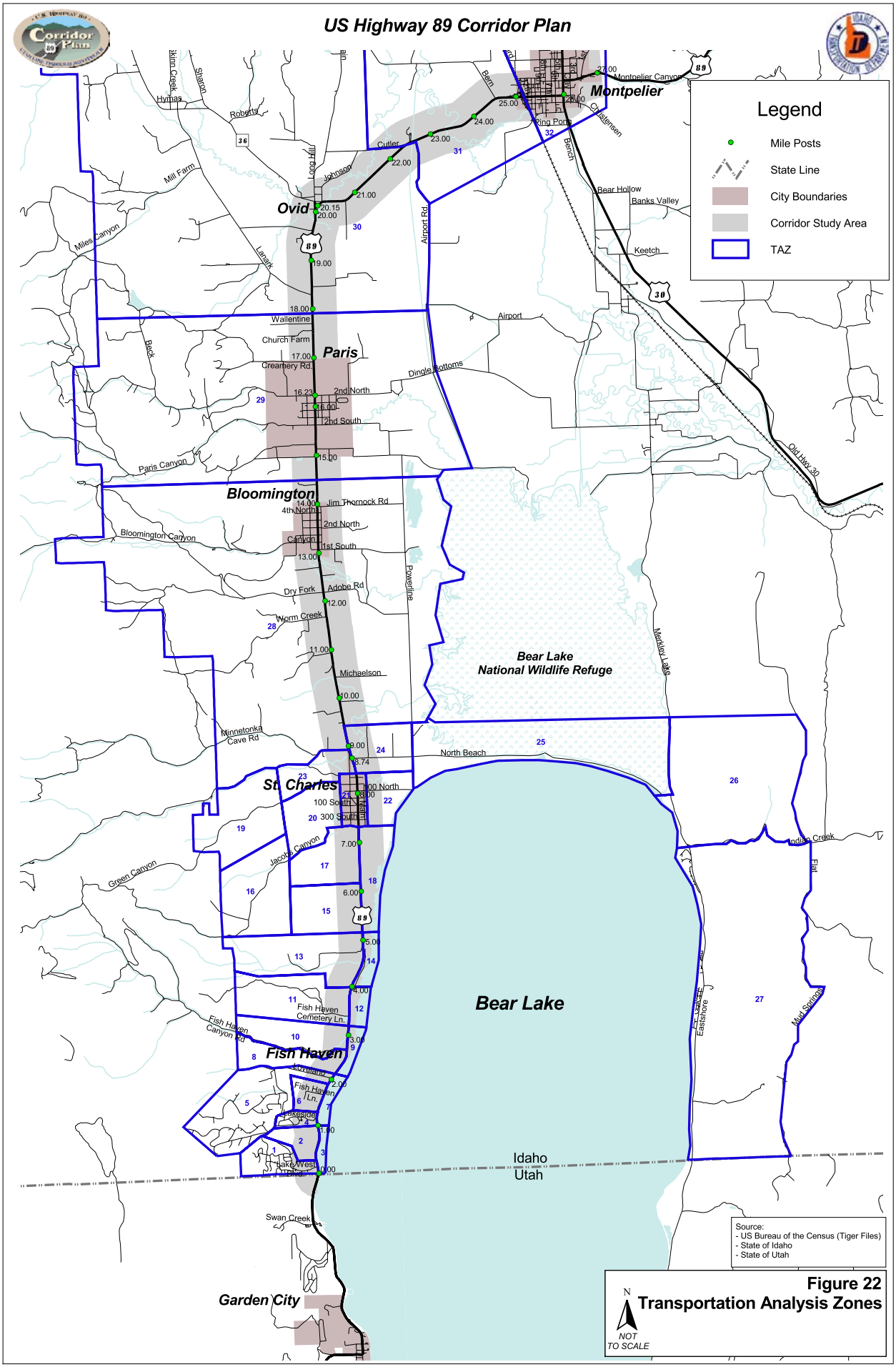
Travel demand forecasts were required for the determination of future transportation system needs along the US 89 corridor. A key element in the development of the forecasts were estimates of 2025 population, employment, and housing units for Bear Lake County. As described in Section III., these estimates were based on an assessment of future land use potential developed using information from the Bear Lake County Comprehensive Plan, Census data, and Bear Lake County residential development approvals. For the purpose of the traffic forecasts, the countywide population and employment estimates were allocated to individual transportation analysis zones (TAZs) for the study area, as shown in Figure 22.

The future year population and employment estimates were used to calculate TAZ growth rates. These growth rates were examined to determine the most appropriate travel forecasting method to be used. To the north of Bear Lake, it appears that future growth will occur at a similar rate to the historical growth in the area. Therefore, future traffic volumes along US 89 (and intersecting roads) to the north of St. Charles were estimated using historical traffic growth rates. Along the majority of this section of US 89, a historical growth rate of less than 1 percent per year was used. Where US 89 shares right-of-way with US 30 between Washington St. and Clay St. in Montpelier, an average annual growth rate of approximately 3% was applied, based on historical traffic counts for US 30. These growth rates, applied to the existing traffic volumes, account for growth in both local trips and regional traffic passing through the corridor.

Future growth rates in the Bear Lake area are expected to exceed the historical growth rates in the area. A large number of recreational housing units are planned around Bear Lake, including the Fish Haven area on the west shore, the Garden City area in Utah, and the east shore area. Therefore, to accurately forecast traffic volumes in this area, a detailed traffic model covering the Bear Lake area (TAZs 1 - 27) was created.

The traffic model incorporates three different vehicle trip types:

- Trips produced within the Bear Lake area - these are internal-internal (I-I) and internal-external (I-X) trips;
- Trips produced outside of Bear Lake area destined to one of the TAZs within the Bear Lake area – these are external-internal (X-I) trips; and


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
TAZ
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
Figure 22
Transportation Analysis Zones
N
NOT TO SCALE

- Trips with an origin and destination outside of the Bear Lake area that pass through via US 89 – these are external-external (X-X) trips.

Each of the trip types was modeled differently. The proportionate share of total traffic volume for each trip type was calibrated within a base year (2002) version of the model using existing traffic count data. A complete description of the traffic forecasting model development may be found in Appendix D.

Trip generation for I-I and I-X trips was forecast for each TAZ based on the number of future housing units and the appropriate trip rate from the *ITE Trip Generation Manual*.[34] These trips were distributed according to the relative attractiveness of the other TAZs, as determined by the level of recreational and retail activity and number of housing units within the TAZs. The future year trip distribution was established by adjusting the base year distribution to reflect future changes in the relative attractiveness of the TAZs. For example, shopping trips that today may be destined for Montpelier could, in the future, utilize future retail developments in St. Charles or Bear Haven, thus reducing the relative attractiveness of the Montpelier TAZ. Table 12 presents the base year and 2025 distributions that were used to assign trips produced by residential development in the Bear Lake area.

Table 12
Distribution Percentages for I-I, I-X Trips

Destination	TAZ	Base Year Percentage	2025 Percentage
South external station (Utah)	N/A	56%	51%
Bear Lake West	1	3%	3%
Lake West Beach	3	2%	2%
Fish Haven Ln.	6	0%	2%
Fish Haven	8	3%	2%
Bear Haven East	12	0%	3%
Bear Haven West	11	0%	6%
St. Charles	21	3%	3%
North Beach retail	24	2%	2%
North Beach recreation	25	18%	18%
Minnetonka Cave	23	3%	3%
North external station (n/o St. Charles)	N/A	10%	5%
Total		**100%**	**100%**

[34] Institute of Transportation Engineers, Trip Generation 6th Edition, (1997).

The X-I trips were comprised of two components. First, trips destined to internal households were forecast following the same procedure used for trips produced by internal households. Second, trips destined to retail or recreational areas were estimated based on historical traffic growth rates at the north and south ends of the corridor. Trips from the north were forecast using the same growth rate described earlier for the area north of Bear Lake (less than 1 percent per year). Trips from the south were forecast using a more recent growth rate (1995 to 2001) that captures the growth trend of traffic from Garden City and other Utah population centers (approximately 5 percent per year).

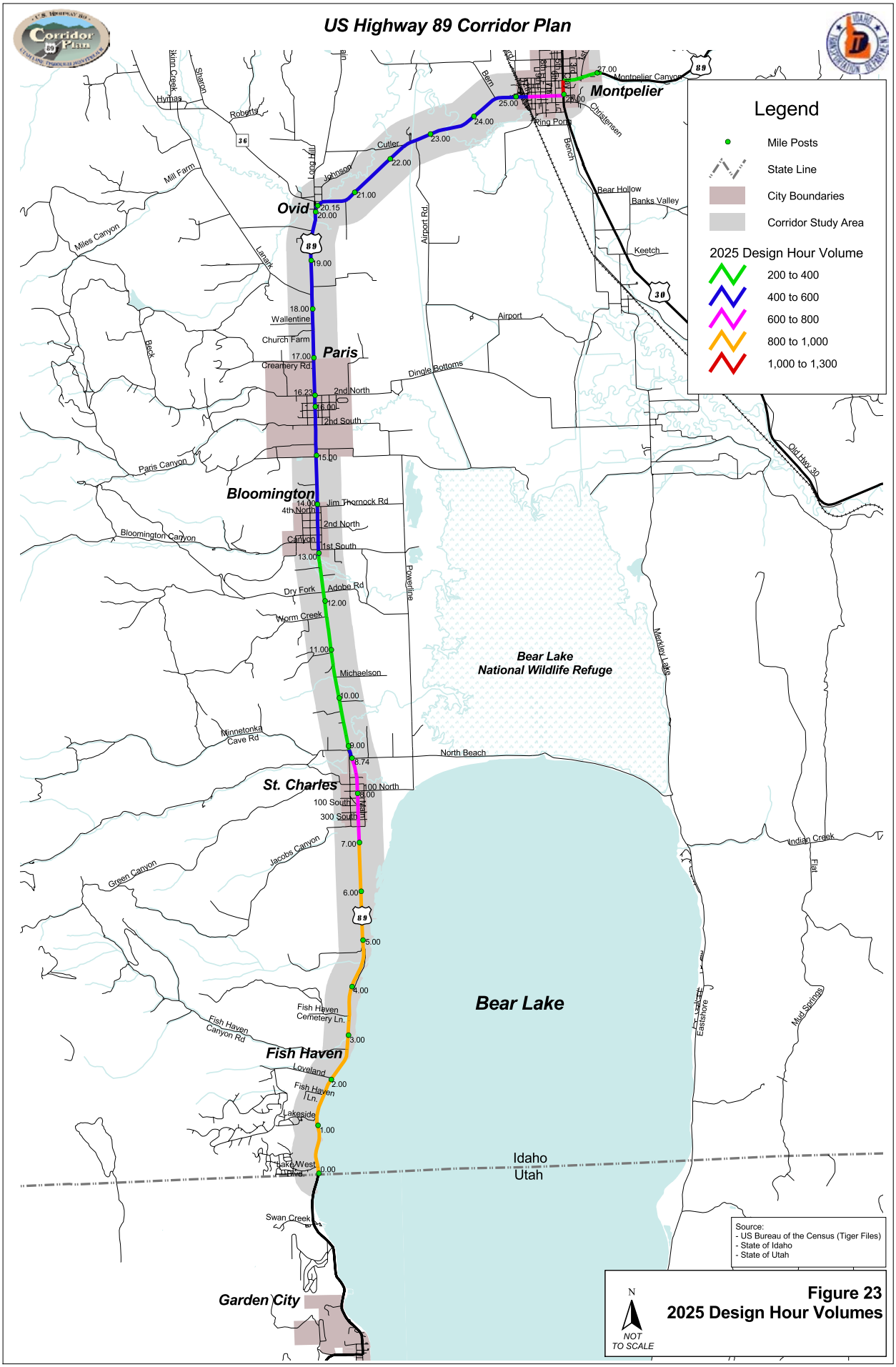
The X-X trips on US 89 were also estimated using the growth rate for the area north of Bear Lake (less than 1 percent per year).

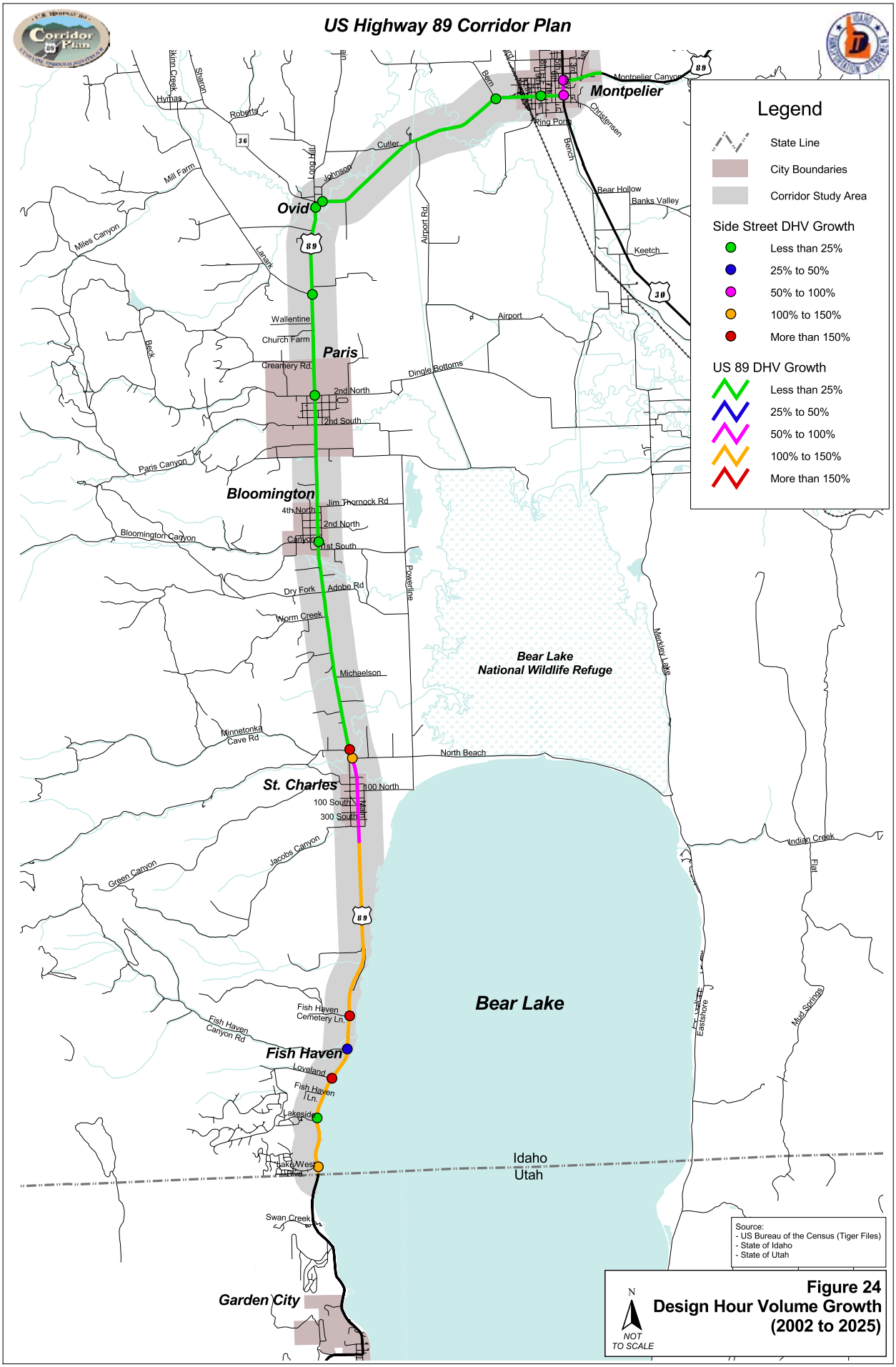
FUTURE TRAFFIC VOLUMES

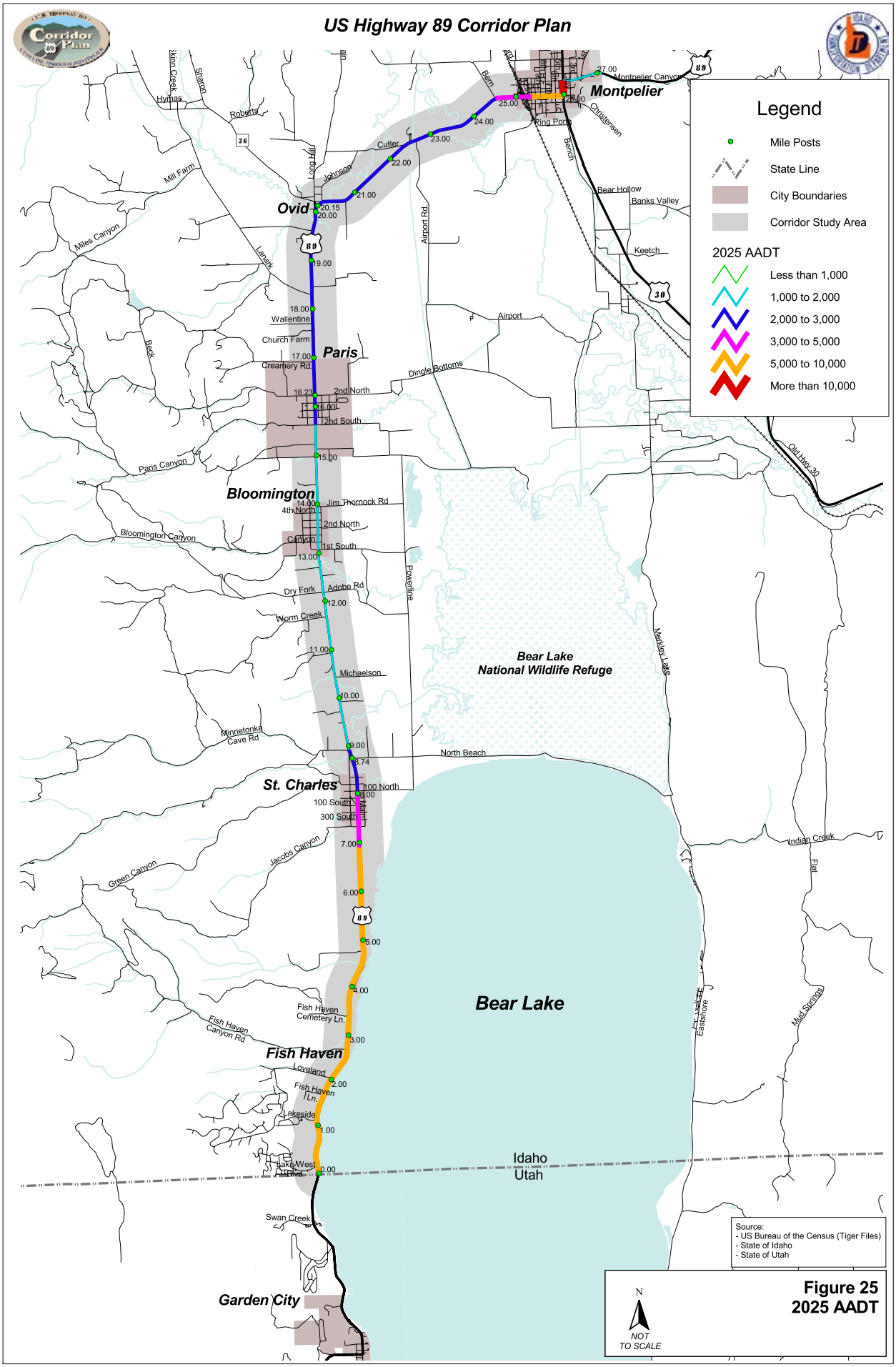
Estimated 2025 DHVs along US 89 within the study area are shown in Figure 23. Comparison of these volumes with the existing volumes shown in Figure 7 indicates that the highest traffic growth will occur south of North Beach Rd. in the Bear Lake area. In the St. Charles/North Beach Rd. area, volumes nearly double to roughly 700 vph, and to the south of St. Charles, they more than double to 800 – 1,000 vph. This is primarily due to the significant increase in recreational housing in the area, as well as growth in through traffic volumes. These traffic growth rates are summarized in Figure 24. Also shown in Figure 24 are traffic growth rates for intersecting roads with US 89. The increased traffic volumes on US 89 associated with these roads reflects the corresponding increase in anticipated future development or activity levels within the areas they serve. Intersecting roads in the Bear Lake area with higher traffic growth rates (50% or more) are Bear Lake West Blvd., Loveland Ln., Fish Haven Cemetery Ln., and North Beach Rd.

Along the remainder of the corridor, 2025 DHVs increase by about only 15% compared to existing volumes, reflecting the low levels of expected housing and employment growth in these areas and the low historical traffic growth rate. The only exception to this is the segment between Washington St. and Clay St. in Montpelier, where volumes increase by about 55% from 800 vph to 1,250 vph. This small segment of the corridor is also a part of US 30, which has a significantly higher historical traffic growth rate than US 89.

Figure 25 shows 2025 AADT volumes along US 89. These volumes were estimated using growth rates derived from the DHV forecasts. Thus, the pattern of future traffic growth is the same as that for the design hour volumes, with the highest increases occurring on the south end of the corridor and low growth occurring along the remainder of the corridor. In the Bear Lake area, future AADT volumes vary by location from 5,000 – 10,000 vpd. Volumes between the Bear Lake area and Montpelier remain


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
2025 Design Hour Volume
200 to 400
400 to 600
600 to 800
800 to 1,000
1,000 to 1,300
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 23
2025 Design Hour Volumes


US Highway 89 Corridor Plan
Legend
State Line
City Boundaries
Corridor Study Area
Side Street DHV Growth
Less than 25%
25% to 50%
50% to 100%
100% to 150%
More than 150%
US 89 DHV Growth
Less than 25%
25% to 50%
50% to 100%
100% to 150%
More than 150%
Montpelier
Montpelier Canyon
Ovid
Paris
Wallentine
Church Farm
Creamery Rd
2nd North
2nd South
Dingle Bottoms
Airport
Airport Rd
Bloomington
4th North
Jim Thornock Rd
2nd North
1st South
Canyon
Bloomington Canyon
Paris Canyon
Dry Fork
Adobe Rd
Worm Creek
Powerline
Michaelson
Ninnetonka Cave Rd
Bear Lake National Wildlife Refuge
Merkley Lake
North Beach
St. Charles
100 North
100 South
300 South
Main
Jacobs Canyon
Green Canyon
Bear Lake
Fish Haven Cemetery Ln.
Fish Haven Canyon Rd
Fish Haven
Loveland
Fish Haven Ln.
Lakeside
Lake West
Idaho
Utah
Swan Creek
Garden City
Indian Creek
Flat
Mud Springs
East Lake Shore
Bench
Ring Point
Christensen
Bear Hollow
Banks Valley
Keetch
Cutler
Johnson
Mill Farm
Miles Canyon
Lanark
Back
Hymas
Roberts
Sharon
Bern
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 24
Design Hour Volume Growth
(2002 to 2025)


US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
2025 AADT
Less than 1,000
1,000 to 2,000
2,000 to 3,000
3,000 to 5,000
5,000 to 10,000
More than 10,000
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 25
2025 AADT

relatively low, in the range of 1,000 – 3,000 vpd. In Montpelier, future volumes are roughly 7,000 vpd along Washington St. and 13,500 vpd along 4th St. To the east of 4th St., volumes drop sharply to 1,000 –2,000 vpd. It is interesting to note that with the significant increases in development and recreational activity assumed in the Bear Lake area, future traffic volumes (5,000 – 6,500 vpd) are forecast to be within the same general category as those along Washington St. in Montpelier (7,000 vpd).

FUTURE ROADWAY NEEDS

Future Capacity and Level of Service

As for existing conditions, future capacity and level of service deficiencies were identified for all road segments and higher-volume intersections along US 89 by comparing future LOS estimates to the LOS standards. This analysis was performed for a "No-Build" network scenario, in which only the signalization improvement at the intersection of Washington St./4th St. in Montpelier was assumed.

Future LOS on Roadway Segments

Segment LOS estimates were developed using the 2025 DHV forecasts and the same methodologies described for the existing conditions analysis. A different segment definition and LOS estimation methodology were used for two of the segments in the Bear Lake area, however, to reflect the changing character of development by 2025. For the segment between Fish Haven and St. Charles, the HIGHPLAN methodology for rural developed areas was considered more appropriate for use than the *HCM2000* rural two-lane highway analysis technique because of the increased development levels near the highway, including the proposed Bear Haven development near Fish Haven Cemetery Lane (see Section III.). Similarly, the rural developed designation was extended to the north of St. Charles to reflect the higher levels of development anticipated between St. Charles and North Beach Rd.

The results of the roadway segment LOS analysis are shown in Figure 26 and Table 13. Comparison of these results to the existing LOS estimates shown in Figure 8 and Table 13 indicate a general degradation in LOS along the segments to the south of North Beach Rd. and maintenance of existing levels of service along the remainder of the corridor to the north. This is consistent with the overall pattern of future traffic growth described in the previous section, in which volumes increase significantly in the Bear Lake area but grow only moderately in the other areas.

Within the Fish Haven area, the 2025 LOS is generally two levels lower than the existing LOS. Between Fish Haven and North Beach Rd., the future LOS drops by one level. The only other segment along the corridor with a change in the level of service is in Montpelier, where the LOS in the westbound/southbound direction decreases from "B" to

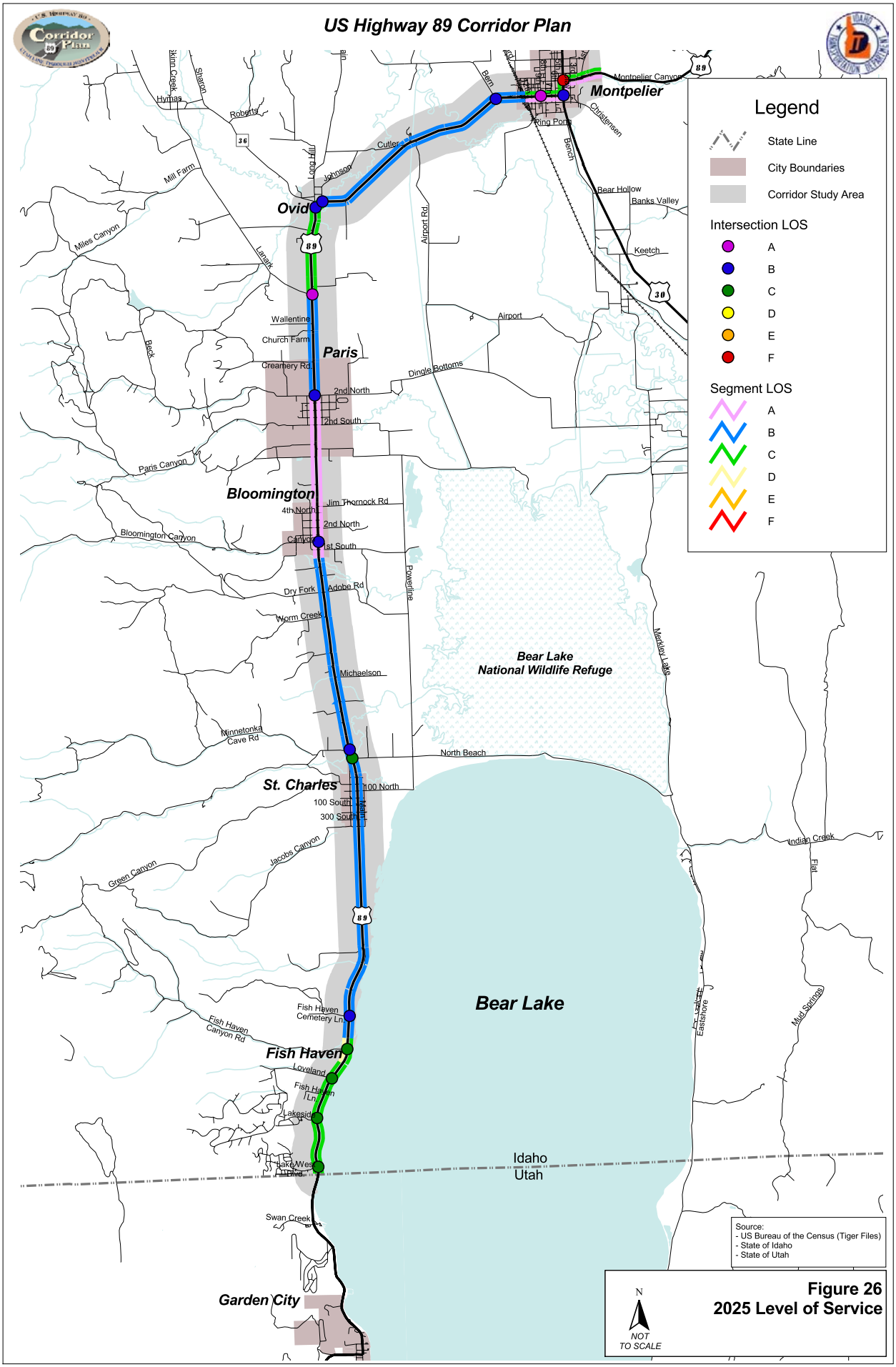

US Highway 89 Corridor Plan
Legend
State Line
City Boundaries
Corridor Study Area
Intersection LOS
A
B
C
D
E
F
Segment LOS
A
B
C
D
E
F
Montpelier
Montpelier Canyon
Ring Point
Christensen
Bench
Bear Hollow
Banks Valley
Keetch
Airport
Airport Rd
Cutler
Johnson
Mill Farm
Ovid
Miles Canyon
Lanark
Wallentine
Church Farm
Paris
Creamery Rd
Dingle Bottoms
2nd North
2nd South
Back
Paris Canyon
Bloomington
4th North
Jim Thornock Rd
2nd North
Canyon
1st South
Bloomington Canyon
Dry Fork
Adobe Rd
Worm Creek
Powerline
Bear Lake
National Wildlife Refuge
Michaelson
Ninnetonka
Cave Rd
North Beach
St. Charles
100 North
100 South
300 South
Jacobs Canyon
Green Canyon
Bear Lake
Fish Haven
Cemetery Ln
Fish Haven
Canyon Rd
Fish Haven
Loveland
Fish Haven
Ln
Lakeside
Idaho
Utah
Swan Creek
Garden City
Indian Creek
Flat
Mud Springs
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT
TO SCALE
Figure 26
2025 Level of Service

Table 13
2025 Level of Service Summary
US 89 Segments

Segment		2025 DHV	2025 LOS*	Existing LOS	LOS Std.	Def. ?
From	To					
Idaho-Utah state line	Fish Haven Creek	468/514	C/C	A/A	C	N/N
Fish Haven Creek	Fish Haven n. boundary	435/476	C/D	B/B	C	N/Y
Fish Haven n. boundary	St. Charles s. city limit	406/404	B/B	A	C	N
St. Charles s. city limit	North Beach Rd.	362/364	B/B	A/A	C	N/N
North Beach Rd.	Bloomington Cr. bridge	394	B	B	C	N
Bloomington Cr. bridge	Bloomington n. city limit	270/197	A/A	A/A	C	N/N
Bloomington n. city limit	Paris s. city limit	435	A	A	C	N
Paris s. city limit	E. 2nd South St. (Paris)	159/275	A/A	A/A	C	N/N
E. 2nd South St. (Paris)	E. 2nd North St. (Paris)	200/241	A/A	A/A	C	N/N
E. 2nd North St. (Paris)	Lanark Rd.	438	B	B	B	N
Lanark Rd.	Ovid corner	477	C	C	B	Y
Ovid corner	R.R. overpass (Mont.)	441	B	B	B	N
R.R. overpass (Mont.)	Montpelier e. city limit	Varies by section	A/C	C/B	C	N/N

* Double letters indicate LOS by direction (northbound/southbound, eastbound/westbound); single letters indicate LOS for both directions.

"C" and in eastbound/northbound direction improves from "C" to "A". The reason for the differing changes by direction is the future travel delays that will occur at the intersections of Washington St./4th St. and 4th St./Clay St. In the past at the Washington St./4th St. intersection, drivers on the stop-controlled eastbound approach of Washington St. incurred significant delay, while drivers on the southbound approach of 4th St., where

there was no stop control, had no delay. However, with the recent installation of a traffic signal at this location, the future delay for eastbound drivers will actually be less, while southbound drivers, who must stop, will be delayed. At the 4th St./Clay St. intersection, the delay for drivers on the stop-controlled westbound approach of Clay St. will become significantly worse due the increase in traffic volumes on 4th St., while the drivers on the northbound approach of 4th St., with no stop control, will be unaffected.

Future year LOS deficiencies are shown in Figure 27 and Table 13. Even though the future LOS along some of the segments will be degraded, the only additional segment falling into the deficient category will be the southbound segment between the northern boundary of Fish Haven and Fish Haven Creek. An interesting result of the LOS analysis at this location is that the LOS for the northbound segment falls one category from "B" to "C" between 2002 and 2025, while the LOS for the southbound segment falls two categories from "B" to "D". This is primarily due to a higher traffic growth rate for the southbound segment (+198%) compared to the northbound segment (+139%). Additionally, the percent of free flow speed, which is used to measure LOS, falls just below the LOS "C" threshold for the southbound segment, but just above this threshold for the northbound segment.

The only other deficient segment shown in Figure 27 is between Lanark Rd. and Ovid corner, which is also currently deficient. The relative lack of future deficiencies along the corridor indicates that while traffic volumes will increase, there will generally be enough reserve capacity within the existing system to adequately accommodate future travel demand.

Future Intersection LOS

All of the study area intersections will operate at or above the level of service standard for 2025, with the exception of 4th St./Clay St. in Montpelier (see Table 14 and Figures 26 and 27). At this location, LOS "F" will occur on the minor road approach (Clay St.) due to the significant increase in traffic volume on 4th St. Of the remaining intersections, 5 will operate at LOS "C" on the minor approach and 10 will operate at LOS "A" or "B". This compares to one deficient intersection and one intersection operating at LOS "C" for 2002. The additional intersections operating at LOS "C" for 2025 are all within the Bear Lake area, similar to the changes in segment levels of service discussed above. The LOS at Washington St./4th St. will actually improve from LOS "E" to LOS "B" due to the installation of the traffic signal.

Reported Future Roadway Capacity Deficiencies

The only reported deficiency related to future capacity was that there will be the general need for passing lanes (see Appendix A).

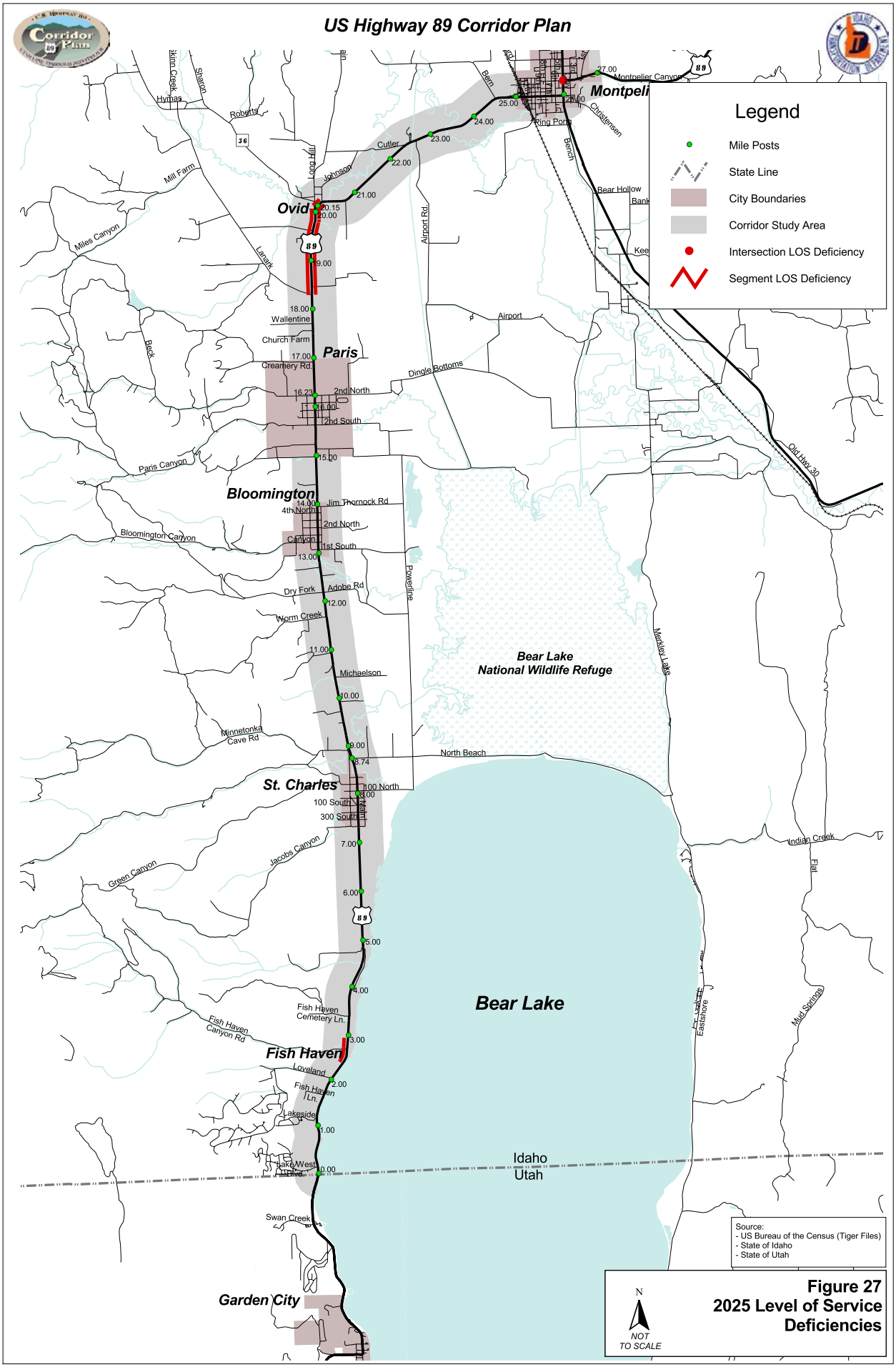

US Highway 89 Corridor Plan
Legend
Mile Posts
State Line
City Boundaries
Corridor Study Area
Intersection LOS Deficiency
Segment LOS Deficiency
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 27
2025 Level of Service Deficiencies

Table 14
2025 Level of Service Summary
US 89 Intersections

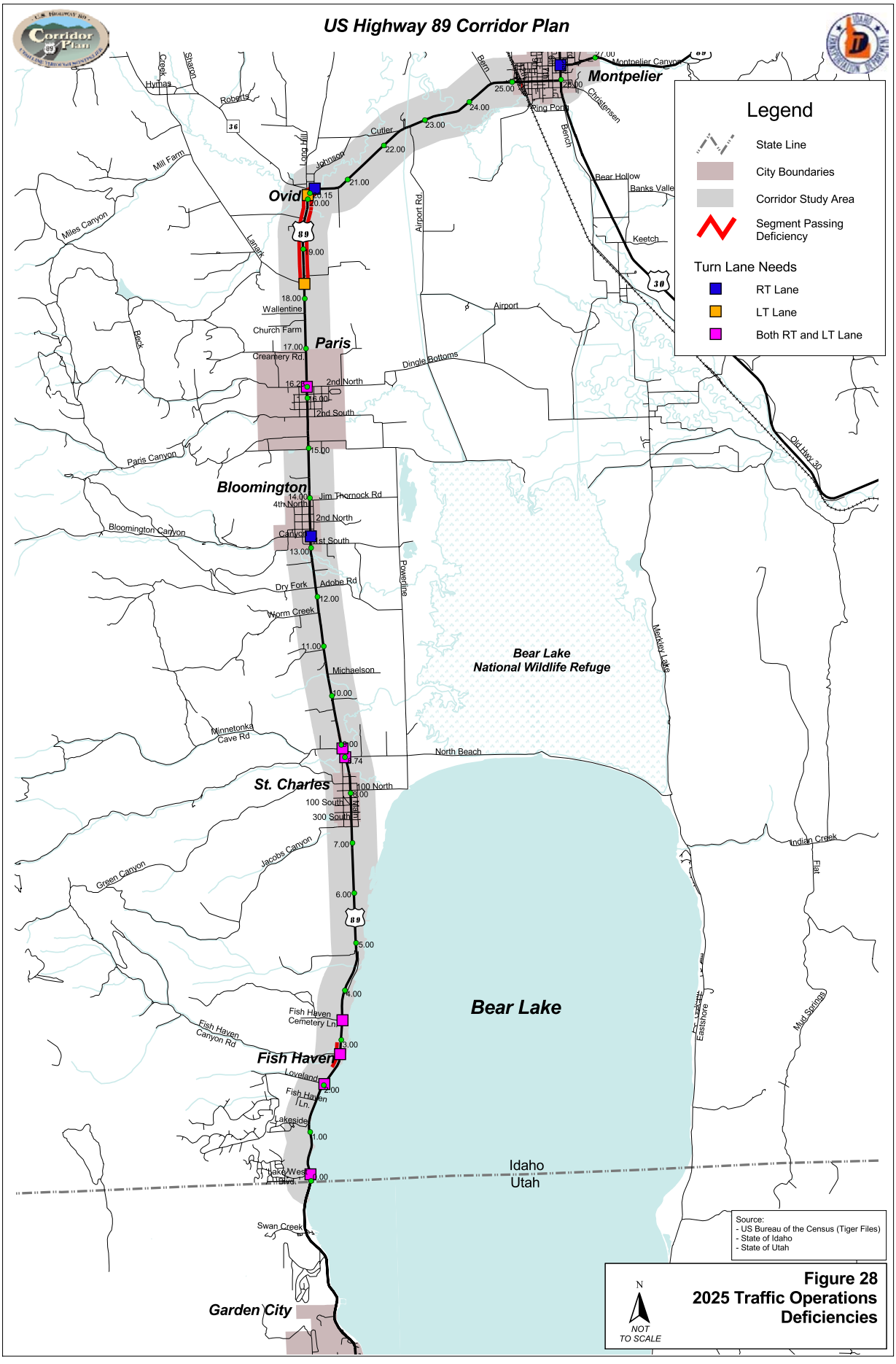
Intersection		2025 LOS*	Existing LOS	LOS Std.	Deficient?
Location	**Control**				
US 89/ Lake West Blvd.	Two-way stop	A/C	A/B	C	N/N
US 89/ Lakeside Dr.	Two-way stop	A/C	A/A	C	N/N
US 89/ Loveland Ln.	Two-way stop	A/C	A/B	C	N/N
US 89/ Fish Haven Canyon Rd.	Two-way stop	A/C	A/A	C	N/N
US 89/ Fish Haven Cemetery Rd.	Two-way stop	A/B	A/B	C	N/N
US 89/ North Beach Rd.	Two-way stop	A/C	A/B	C	N/N
US 89/ Minnetonka Cave Rd.	Two-way stop	A/B	A/A	C	N/N
US 89/ Bloomington Canyon Rd.	Two-way stop	A/B	A/B	C	N/N
US 89/ 2nd North St.(Paris)	Two-way stop	A/B	A/B	C	N/N
US 89/ Lanark Rd.	Two-way stop	A/A	A/A	B	N/N
US 89/ Ovid corner (s.)	Two-way stop	A/B	A/B	B	N/N
US 89/ Ovid corner (n.)	Two-way stop	A/B	A/B	B	N/N
US 89/ Bern Rd.	Two-way stop	A/B	A/A	B	N/N
Washington St./8th St.	Traffic signal	A	A	C	N
Washington St./4th St.	Traffic signal	B	A/E	C	N
4th St./Clay St.	Two-way stop	A/F	A/C	C	N/Y

* Double letters indicate level of service by movement (major/minor) for unsignalized intersections. Single letter indicates overall level of service for a signalized intersection.

Future Traffic Operations

Future Traffic Operations on Roadway Segments

Use of the "percent time-spent-following" level of service criterion as a measure of passing opportunities shows that future traffic operations will be deficient between Lanark Rd. and Ovid corner (see Figure 28). This is also an existing deficiency.


US Highway 89 Corridor Plan
Legend
State Line
City Boundaries
Corridor Study Area
Segment Passing Deficiency
Turn Lane Needs
RT Lane
LT Lane
Both RT and LT Lane
Montpelier
Ovid
Paris
Bloomington
St. Charles
Fish Haven
Garden City
Bear Lake
Bear Lake National Wildlife Refuge
Idaho
Utah
Source:
- US Bureau of the Census (Tiger Files)
- State of Idaho
- State of Utah
N
NOT TO SCALE
Figure 28
2025 Traffic Operations Deficiencies

Future Intersection Traffic Operations

Future intersection turn lane deficiencies were identified in the same manner as existing deficiencies based on the 2025 DHVs and ITD's turn lane warrants (see Appendix C for definition of this term). In addition to the existing needs presented earlier, a northbound left-turn deficiency will exist at the intersection of US 89/Loveland Ln. (see Figure 28). Additional right-turn deficiencies will occur at Fish Haven Canyon Rd., Fish Haven Cemetery Rd., and 2nd North St. in Paris (northbound and southbound).

Table 15
2025 Left-Turn Lane Deficiency Summary
US 89 Intersections

Intersection	Northbound/Eastbound			Southbound/Westbound		
	LT Vol.	Volume Threshold	Def. ?	LT Vol.	Volume Threshold	Def. ?
US 89/Lake West Blvd.	36	12	Y	N/A	N/A	N/A
US 89/Lakeside Dr.	6	12	N	N/A	N/A	N/A
US 89/Loveland Ln.	28	12	Y	N/A	N/A	N/A
US 89/Fish Haven Canyon Rd.	40	12	Y	N/A	N/A	N/A
US 89/Fish Haven Cem. Rd.	18	12	N	N/A	N/A	N/A
US 89/North Beach Rd.	0	12	N	50	12	Y
US 89/Minnetonka Cave Rd.	87	12	Y	N/A	N/A	N/A
US 89/Bloom. Canyon Rd.	12	12	N	1	12	N
US 89/2nd North St. (Paris)	15	12	Y	5	12	N
US 89/Lanark Rd.	15	12	Y	N/A	N/A	N/A
US 89/Ovid corner (s.)	57	12	Y	N/A	N/A	N/A
US 89/Bern Rd.	0	12	N	N/A	N/A	N/A

Table 16
2025 Right-Turn Lane Deficiency Summary
US 89 Intersections

Intersection	Northbound/Eastbound			Southbound/Westbound		
	RT Vol.	Volume Threshold	Def. ?	RT Vol.	Volume Threshold	Def. ?
US 89/Lake West Blvd.	N/A	N/A	N/A	36	5	Y
US 89/Lakeside Dr.	N/A	N/A	N/A	4	5	N
US 89/Loveland Ln.	N/A	N/A	N/A	21	5	Y

Table 16 (cont.)
2025 Right-Turn Lane Deficiency Summary
US 89 Intersections

Intersection	Northbound/Eastbound			Southbound/Westbound		
	RT Vol.	Volume Threshold	Def. ?	RT Vol.	Volume Threshold	Def. ?
US 89/Fish Haven Canyon Rd.	N/A	N/A	N/A	17	5	Y
US 89/Fish Haven Cem. Rd.	N/A	N/A	N/A	9	5	Y
US 89/North Beach Rd.	133	5	Y	1	5	N
US 89/Minnetonka Cave Rd.	N/A	N/A	N/A	20	5	Y
US 89/Bloom. Canyon Rd.	0	5	N	14	5	Y
US 89/2nd North St. (Paris)	10	8	Y	8	8	Y
US 89/Lanark Rd.	N/A	N/A	N/A	2	6	N
US 89/Ovid corner (n.)	N/A	N/A	N/A	94	5	Y
US 89/Bern Rd.	N/A	N/A	N/A	N/A*	N/A	N/A
Washington St./4th St.	1	8	N	N/A	N/A	N/A
4th St./Clay St.	93	5	Y	28	5	Y

* Westbound right-turn lane already exists.

Reported Future Traffic Operations Deficiencies

As shown in Figure 10 and Appendix A, nearly all of the reported future traffic operations deficiencies were related to increased congestion in the Bear Lake area. Specific deficiencies in this area include the need for:

- Scenic overlooks and pull-outs;
- Major realignment or bypass of US 89 around Fish Haven to allow room for a four-lane widening;
- Additional lake access parking; and
- Frontage roads.

Future deficiencies reported for the entire corridor were increased conflicts between local and through traffic and need to limit direct driveway access to the highway.

Future Traffic Safety

Future safety deficiencies were not analyzed because there is no reliable method for forecasting safety conditions. The only reported future safety deficiency was the potential need for reducing the existing 65 mph speed limit between Fish Haven and St. Charles due to increased traffic accessing the highway along this segment.

Future Roadway Geometrics

Future Geometrics on Roadway Segments

Based on the existing lane widths of 12' or greater along US 89 and ITD's geometric standards shown in Table 8, there would be no lane width deficiencies by 2025. Because ITD's shoulder width standards vary by traffic volume level, there would be a small increase in shoulder width deficiencies with the higher future traffic volumes. This would occur along the segment between Creamery Rd. and Lanark Rd. to the north of Paris, a distance of roughly 1.5 miles.

Future Bridge Geometrics

There would be no other bridge width deficiencies by 2025 in addition to the existing deficiencies at the Ovid Creek (south) and Ovid Creek (east) bridges.

Future Intersection Geometrics

Since intersection and stopping sight distance deficiencies are based on speed and approach grade only and do not include traffic volume, the same deficiencies identified for existing conditions would apply for future conditions.

Approach lane width requirements for minor roads intersecting US 89 will range from 9 - 11 feet. Based on these requirements, a future lane width deficiency was identified for Lake West Blvd., in addition to the existing deficiencies at Bloomington Canyon Rd., Fish Haven Cemetery Rd., Loveland Lane, and Lakeside Dr. As for existing conditions, the only future approach grade deficiency will occur at Lake West Blvd.

Reported Future Geometric Deficiencies

There were no reported future geometric deficiencies.

Future Bicycle and Pedestrian Conditions

The bicycle facility deficiencies described in the existing conditions section included the need for some type of bicycle facility along the entire length of US 89 and an off-system trail extending through the Fish Haven area and north through the town of St. Charles to North Beach Rd. or beyond. These needs may be expected to increase in the future with the growth in recreational development in the Bear Lake area and the general increase in popularity of US 89 as a recreational bicycling route.

Additional pedestrian facility needs will be related to the specific location of future attractors, such as retail development or recreational facilities, and the proximity of surrounding residential development. Where attractors and residential development of sufficient size are located within ¼ mile of one another, additional pedestrian facilities will be required. One such area is the proposed Bear Haven development near Fish Haven Cemetery Lane. Here, because of the location of the retail and recreational attractors relative to housing, it might be possible to serve pedestrian demand by a system of internal trails within the development rather than pedestrian facilities directly adjacent to US 89. The need for future pedestrian facilities in other areas must be determined on a case-by-case basis as the details of specific development proposals become known. Policy decisions and implementation should be further informed by local planning efforts and the *US 89 Pathway Reconnaissance Study*.[35]

The provision of bicycle and pedestrian facilities is consistent with ITD policy, as reflected in ITD Administrative Policy A-09-08, titled "Bicycle/Pedestrian Facilities", which states that: "Development and construction of bicycle/pedestrian facilities shall be assessed on all federal-aid or state-funded highway projects. Bicycle/pedestrian facilities should be compatible with local bicycle/pedestrian comprehensive plans. If no plan exists, the Department should make every effort to provide facilities compatible with the area.".[36]

Future Conditions for Other Modes

No future needs were identified for any of the other corridor transportation modes in the *Idaho Transportation Plan*[37], ITD's modal plans, or the Bear Lake County Comprehensive Plan.

[35] Idaho Tranaportation Department, US 89 Pathway Reconnaissance Study, (2005).
[36] Idaho Transportation Department, Administrative Policy A-09-08 – Bicycle and Pedestrian Facilities, (1993)
[37] Idaho Transportation Department, Idaho Transportation Plan, (1995).